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Szkutnia
Boatbuilding
Båtbygging

OUTLINES

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Boatbuilding
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Online classes are one of the educational forms in the Szkutnia Project. Their aim is to review the theory classes, integrate the participants and allow them to grow, and to solve problems that come up during the project. Such classes require a lot of concentration on the part of both instructors and participants.

The project made use of various online tools that can be also applied in other similar projects. The important thing is to make the right selection so they are easy to understand and use both by the participants and by the instructors in order not to waste time when operating them or fatigue the participants.

Online tools used in the Szkutnia Project:

1. **Zoom** – videoconferencing software used in every class under the project. Zoom's features include screen sharing, splitting the participants into rooms to work in subgroups, showing videos and simultaneous interpretation for non-Polish speaking guests.

2. **Trello** – was the primary source of information for the participants throughout the project. It had messages concerning the location of the workshops, a timetable with a division into groups, links to online classes, the literature on the topics covered under the project, access to the participant's Jamboard notes (as described below). The participants also used the app to share boating and boatbuilding trivia with each other and gain access to document specimens, such as the rules and contract of participation.

3. **Jamboard** – is a group whiteboard that the participants had access to throughout the project. It was available under a permanent link and most of the refresher exercises described in the lesson plans were done there. The tool allows the participants to do the exercises together at the same time, including a possibility to add their own graphics and links. Another advantage is that it provides the capability to use various visuals (colours, underlining, backgrounds) that help absorb new information and highlight the most important information.

4. **Kahoot** – is a tool to make quizzes for the participants. The results are displayed after every question, a leader board is shown at the end along with the time it took to answer the questions. The participants answer questions within a time limit so that everyone has the same amount of time to answer; the length of the test depends on the instructor, which is another advantage.

5. **Mentimeter** – is an app to create presentations with real-time participant feedback. It is used to carry out surveys, quizzes and allows you to export this data as an .xls or .pdf file.

6. **Google Forms** – allow you to create tests and anonymous surveys for the participants. This tool has the capability for you to create open, closed and multiple choice. You can add illustrations, download a spreadsheet with the collected responses and inform the user about the responses that have been submitted. After every class, the project participants receive a link to a survey produced by the instructor. Every survey concerns specific classes and takes up to 4 minutes to complete it.

Example survey:

1. How do you rate the class in general?

- [ ] Very good
- [ ] Rather good
- [ ] Neither good nor bad
- [ ] Bad
- [ ] Very bad

2. How do you rate the mixer sections of the meeting?

- [ ] Very good
- [ ] Rather good
- [ ] Neither good nor bad
- [ ] Bad
- [ ] Very bad

3. How do you rate the content sections of the meeting?

- [ ] Very good
- [ ] Rather good
- [ ] Neither good nor bad
- [ ] Bad
- [ ] Very bad

4. How do you rate the logistics sections of the meeting?

- [ ] Very good
- [ ] Rather good
- [ ] Neither good nor bad
- [ ] Bad
- [ ] Very bad

5. How do you rate the specific exercises?
[ENTER THE EXERCISE DONE IN CLASS]

- [ ] Very good
- [ ] Rather good
- [ ] Neither good nor bad
- [ ] Bad
- [ ] Very bad

6. How do you rate the specific exercises?
[ENTER THE EXERCISE DONE IN CLASS]

- [ ] Very good
- [ ] Rather good
- [ ] Neither good nor bad
- [ ] Bad
- [ ] Very bad

7. How do you rate the specific exercises?
[ENTER THE EXERCISE DONE IN CLASS]

- [ ] Very good
- [ ] Rather good
- [ ] Neither good nor bad
- [ ] Bad
- [ ] Very bad

8. How do you rate the way the online meeting is held?

- [ ] Very good
- [ ] Rather good
- [ ] Neither good nor bad
- [ ] Bad
- [ ] Very bad

9. Was today's meeting essential?

- [ ] Yes
- [ ] Somewhat
- [ ] Neither yes nor no
- [ ] Not really
- [ ] No

10. Did you learn something at the meeting today?

- ☐ Yes
- ☐ Somewhat
- ☐ Neither yes nor no
- ☐ Not really
- ☐ No

11. Would you change anything about the meeting?
Open-ended question
.....

12. Do you consider yourself a leader in group work?
Open-ended question
.....

13. Do you feel that your involvement in the Szkutnia Project is greater than others'?

- ☐ Yes, it's greater
- ☐ It's the same as others'
- ☐ No, it's lesser

14. Do you feel that all the participants are equally involved in the project?
Open-ended question
.....

Throughout the Szkutnia Project, each class took 60 minutes and was held in groups of 10. The classes were mandatory, the participants were allowed two absences. The objective was to have active participation in the classes, which is why the exercises were selected specifically for group, subgroup and individual work. The role of the instructor was to bring the participants together, complete their work and put the participants on the right track. The instructor also played the role of a moderator and mentor by pointing out how to find solutions and how information can be found. Inherently, the information provided during the online classes was supplementary to the knowledge that the participants gained during the weekend classes. Every lesson plan covered 55 minutes because the first 2 minutes of the class were dedicated to welcoming the students and the final 3 minutes to questions and goodbyes.

The student learns/gains:

- the skill to write cooperation contracts
- the skill to find requested online content
- the skill to work in a group
- the skill to remember and categorise new information

Tools:

- Jamboard (or any other tool that provides the means for online group work)
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own)

Preparation and planning:

During the class, the project participants work in groups of 10. The instructor may split them into smaller groups.

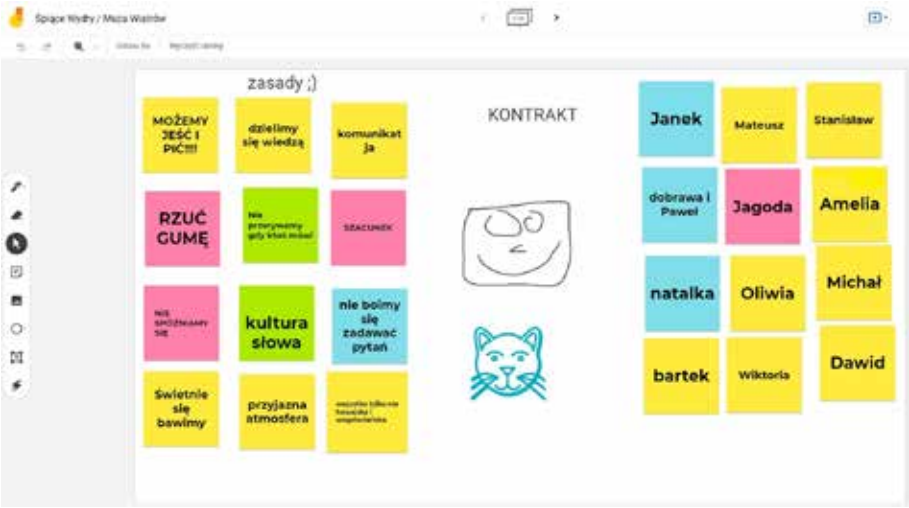
Exercise 1. / duration: 10 minutes / aim: getting to know each other

Each participant is asked to introduce themselves and say 3 words that describe them (this can be the name of the place they come from, a hobby, favourite band or whatever comes to mind). The group is asked to pay attention and try to remember as many words as possible.

Exercise 2. / duration: 20 minutes / aim: establish the rules and good practices during online classes for the duration of the project

In order for the entire project to be carried out efficiently, it is good to begin by establishing a contract that every person taking part in the class needs to comply with. The instructor introduces the idea of a class contract. The students think about what values they and the instructor should follow during the online classes and together they establish the rules. The participants write down their ideas on the Jamboard as colour virtual sticky notes. The author of each idea presents it and argues for it. Each note illustrates one rule and must be accepted by all the group members. If there is no consensus, the instructor moderates a discussion in order to find the arguments for and against. When all the rules have been established and approved, the participants sign their names on the Jamboard. Prior to the classes, the instructors should draw up a catalogue of their own rules so as to add them in order to encourage the participants to come up with their own. This will also impose the instructor's work pace.

Sample Jamboard illustrating Exercise 2.



Sample rules:
Do not be late for class
You can eat during online classes
Cameras don't have to be on, but they are very welcome to be
Use the "I" phrasing; do not talk on others' behalf

Exercise 3. / duration: 10 minutes / aim: boosting creativity

The instructor splits the participants into two groups of 5, the same groups as in the first theory classes. Each group has their its own zoom room and receives a different task: the first group is tasked with listing all the words they associate with boating, while the second group lists all the words they associate with boatbuilding. Each group gets 10 minutes to prepare their topic. The participants work together without using any online resources, only their own experience. The last 5 minutes of the exercise are dedicated to discussing the associations and defining unfamiliar concepts. Additionally, the other group gets to add to their fellow participants' Jamboard. They can all go back to that Jamboard throughout the course. The participants can add the definitions they learn and add further concepts.

Sample associations:
Boating – reefing / gasket / centreboard / halyards / shackle / mizzen / centreboard / Cunningham
Boatbuilding – keel / transom / frame / planes / mast yoke / rib

Exercise 4. / duration: 10 min / aim: prepare for classes in the boatbuilding shop

The participants work together in a group of 10. The task is to come up with questions that they want to ask the boatbuilders during the workshop exercises. The questions may be random and concern any aspect related to working in the shop.

Exercise 5. / duration: 5 minutes / aim: team building

Refers to Exercise 1. Each participant is requested to say the name of any person in the group and recall their 3 descriptive words from the initial exercise. A person once described cannot be chosen again.

The student learns/gains:

- information about Atlantic Challenge International,
- refreshment of basic English communication terms,
- the skill to draw conclusions and information from viewed material,
- the skill to identify types of wood,
- the skill to identify woodworking tools.

Tools:

- Jamboard (or any other tool that provides the means for online group work)
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own)
- Youtube (or any other tool that provides the means to play film footage)

Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

Exercise 1. / duration: 30 minutes / aim: group integration, warmup

The instructor uses the screen sharing option to show the participants a sailing or boatbuilding video.

Link used during class:
http://wildacre.ie/portfolio/atlantic-challenge-international/

The video is about Atlantic Challenge International, but the instructor is free to choose. The instructor's task is to prepare questions to test the participants' perceptiveness.

Sample questions for a group:
What nationalities are shown in the video?
How many sails has the boat got?
What year did the first ACI take place?
Who came up with the ACI concept?
How many crewmembers are there in an ACI boat?

The exercise is to encourage discussion and expression among the participants. Later, they can be encouraged to talk about casual memories of swimming and sailing. It is vital to make the less experienced participants comfortable so that they take part in the discussion. If they do not have any memories of sailing, you can ask them about their dreams. The participants should feel at ease and know that they have the right to speak.

Another feature of this exercise is to check the English language competence of the Project participants. This way, the instructor knows how frequently shipbuilding and sailing terms should be introduced in further stages of the work.

Exercise 2. / duration: 10 minutes / aim: to refresh knowledge about wood

Prior to the class, the instructor prepares two Jamboards with pictures of different types of wood.

Sample types of wood:
northern red oak / ash / pine / red beech / maple / common beech / oak / birch / spruce

The exercise is carried out in two groups where the participants' task is to label the photographs on the jamboard.



Sample photographs illustrating Exercise 2.

Exercise 3. / duration: 10 minutes / aim: to refresh knowledge about the tools used for woodworking in boatbuilding shops

Prior to the class, the instructor prepares two Jamboards with pictures of different types of tools used in boatbuilding shops.

Sample tools:
sawing machine / chisel / plane / pincers / angle grinder / orbital sander / machine tool / jigsaw / pliers

The exercise is carried out in two groups where the participants' task is to label the photographs on the jamboard.

Sample photographs illustrating Exercise 3.

During the work on exercises 2 and 3, the instructor may switch the participants so that different people work together on the two tasks. This way, the participants will learn how to work in groups and come up with mechanisms to work together in changing circumstances.

Exercise 4. / duration: 10 minutes / aim: introduction to the surveys

The project method assumes the ongoing involvement of the participants in the learning process and their voice on how the classes are run to give them a feeling of active participation and makes everyone feel an equally important element of the project.

In this exercise, the instructor explains the role of the survey and the way it should be filled out. Next, the instructor sends the link to the project participants and asks them to fill out the survey.

The student learns/gains:

- logical thinking skills,
- the skill to work in groups,
- Polish boat structure terms,
- English sailing and boatbuilding terms,
- creative thinking skills.

Tools:

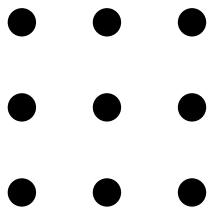
- Jamboard (or any other tool that provides the means for online group work),
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own),
- materials prepared by the instructor (brain teaser in exercise 1, boat structure illustration in exercise 2, blocks: term – definition – English translation in exercise 3).

Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

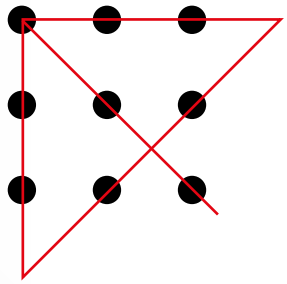
Exercise 1. / duration: 7 minutes / aim: to develop creative out of the box thinking

Prior to the class, the instructor prepares a brain teaser with the objective to connect 9 dots with 4 straight lines. The idea is to draw the lines through all the dots without lifting one's hand.



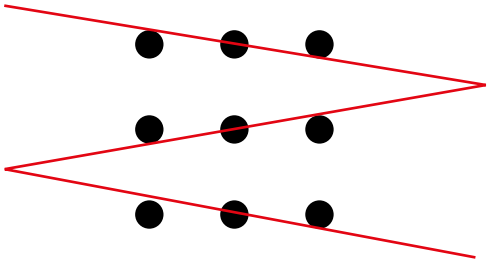
Brain teaser in exercise 1.

There may be many answers to the puzzle depending on the participants' creativity. Below are the most typical answers:



Sample answer to brain teaser in exercise 1.

Sample answer to brain teaser in exercise 1.



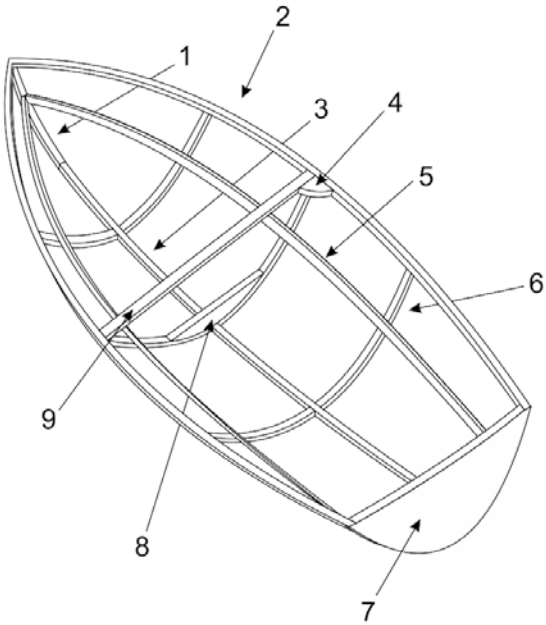
Each participant works on this exercise on their own, reporting their readiness to answers on the chat.

This exercise shows that there is no single correct way to solve a problem. With this exercise the participants learn creative, out of the box thinking and stimulate their spatial imagination, vital for working in a boatbuilding shop.

Exercise 2. / duration: 20 min / aim: introduction of boat structure terminology

The instructor prepares the following educational resources: a picture of a skeleton of a boat with the most important structural components marked out and puts them on two jams with the digits 1 to 9 (answers are not on the jamboard).

Sample picture of a boat skeleton for exercise 2.



Author: Lips – Independent work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=19464237

Answers:

1. bow stem
2. stringer
3. keel
4. knee
5. stringer
6. frame
7. transom
8. floor plank
9. beam

The participants are split by the instructor into two groups. Their task is to match the correct terms with the designated components.
The participants may not use any online resources, only their own knowledge. Next, the participants and the instructor check the test together, filling in any gaps and explaining the particular terms.

The participants get to know the basic structural components of a boat, learn the names of the parts and know where to locate them.

Exercise 3. / duration: 15 minutes / aim: to learn English sailing and boatbuilding terms

The instructor prepares a set of three blocks of boatbuilding and sailing terms: term – definition – English translation. The instructor prepares such a set for each group.

Sample blocks:

term	definition	English translation
dziób	front part of the hull of every vessel	bow
maszt	component of masting that holds up and manoeuvres the rig of the vessel	mast
tylnica	extension of the keel in the direction of the stern	sternframe/ sternpost
fał	raises the sails and the mobile part of the masting	halliard/halyard
pawęż	one of the possible edges of the stern above the waterline transom	transom
balast stały	load on the keel fastened to the vessel's bottom	ballast keel
gafel	diagonal spars put up together with a sail	gaff
bezan	sail attached to the final mast (on yachts with two or more masts)	mizzen
bajdewind	course where the wind is blowing from the front, at an angle, from the port or starboard side	close reach/ close to the wind
sztag	lines of the standing rigging that stabilise the masting in the vessel's plane of symmetry	stay

odbijacz	object that absorbs the energy of a vessel's hitting a quay or another vessel during manoeuvres or whilst at berth, and that protects the hull and quay from damage due to friction	fender
frame	the hull's frame that gives the hull its shape	rib/frame
jarzmo masztu	grip that holds a yacht's or boat's mast upright	mast yoke
grotmaszt	a sailing vessel's main mast	main mast
rumpel	the simplest tool used to steer a vessel	tiller
dziobnica	extension of the keel in the direction of the bow	steam/nose
poszycie	external tight layer of a vessel's hull, keeps it buoyant and gives it its final shape	plating
stępka	structural axis of a vessel's skeleton, the basis of the hull's structural strength	keel
baksztag	course where the wind is blowing from the back but from an angle to the port or starboard side	quarter/ broad reach
kabestan	device that helps to raise sheets and halyards	capstan
rufa	back part of the vessel, both above and below the waterline	stern
maszt przedni	vertical spar in the front part of a sail-powered vessel	fore mast

The terms are scrambled on the board. The participants are split into groups of two. Their task is to match all three components. When they've finished, they present their results to everyone. Next, the instructor and participants check the boards, correcting any mistakes and filling in any missing components.

The participants build their vocabulary by adding sailing and boatbuilding terms, learn what the function of each component is and know their English equivalents.

Homework: The participants are to find illustrations of all the terms presented in exercise 3.

Exercise 4. / duration: 13 minutes / aim: to stimulate creative thinking

The participants are split by the instructor into two groups. Their task is to write down as many words associated with Norway as they can. Next, they are to form a logical sentence with all these words.

Sample Jamboard illustrating Exercise 4.

The exercise develops creative thinking and helps integrate the group members.

The student learns/gains:

- knowledge of sailing theory,
- Polish sailing terminology,
- the skill to look for and categorise information,
- inland navigation signs,
- maritime movies.

Tools:

- Jamboard (or any other tool that provides the means for online group work),
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own),
- Mentimeter (or any other tool used to carry out a quiz),
- materials prepared by the instructor (picture for exercise 1, test for exercise 3, stills from maritime movies for exercise 4).

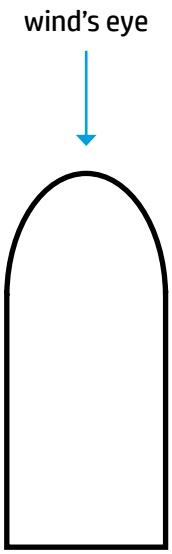
Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

Exercise 1. / duration: 10 minutes / aim: to refresh knowledge of wind directions

The instructor prepares the following educational resources: a picture with a rough shape of a boat and a caption with “wind’s eye.”

Sample picture used for exercise 1.

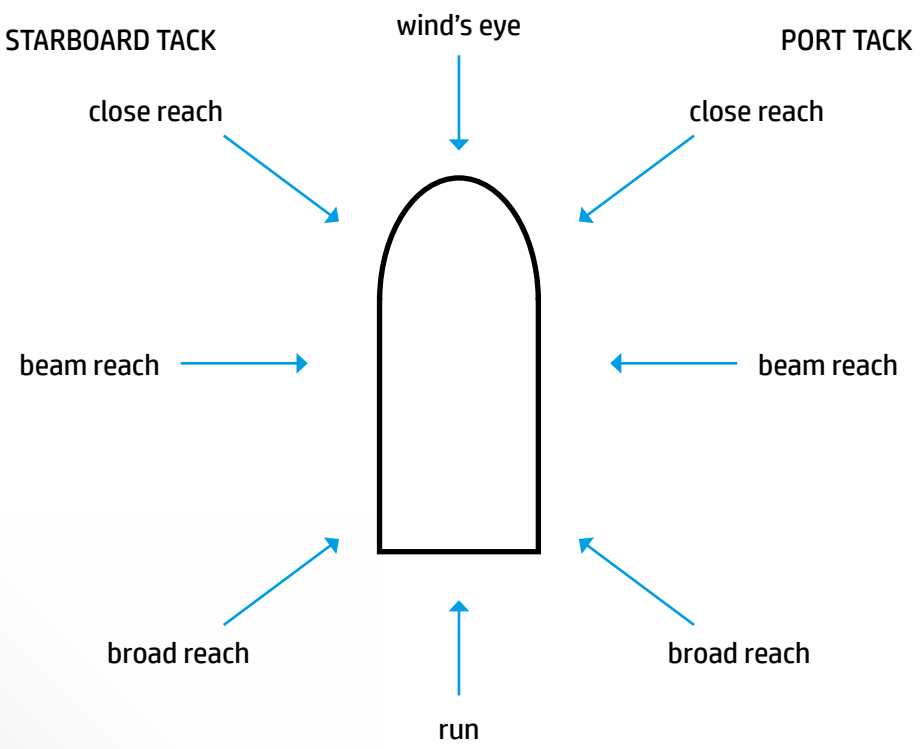


The instructor divides the participants into two or three groups. Each group receives a Jamboard with a drawing of a boat with a marked wind direction (dead wind).

The participants write in the names of the winds that affect the boat when sailing and determine starboard tack or port tack. Next, the instructor initiates a discussion and talks over particular kinds of wind and how they affect sailing

Kinds of wind that affect a sailing vessel:
dead wind: an angle where the sails do not work and the yacht cannot move forward,
close reach – wind blowing from the front, at an angle from starboard or port,
beam reach – wind blowing into the starboard or port, perpendicularly to the yacht's axis,
broad reach – wind blowing from the behind, but at an angle to starboard or port,
run – wind blowing from the stern,
starboard tack – course when the wind blows from starboard (right side),
port tack – course when the wind blows from port (left side).

Answer to exercise 1.



The participants can name the winds that affect the boat, point to and tell the difference between the directions of their interaction, and determine the relationship between the wind and the boat's course.

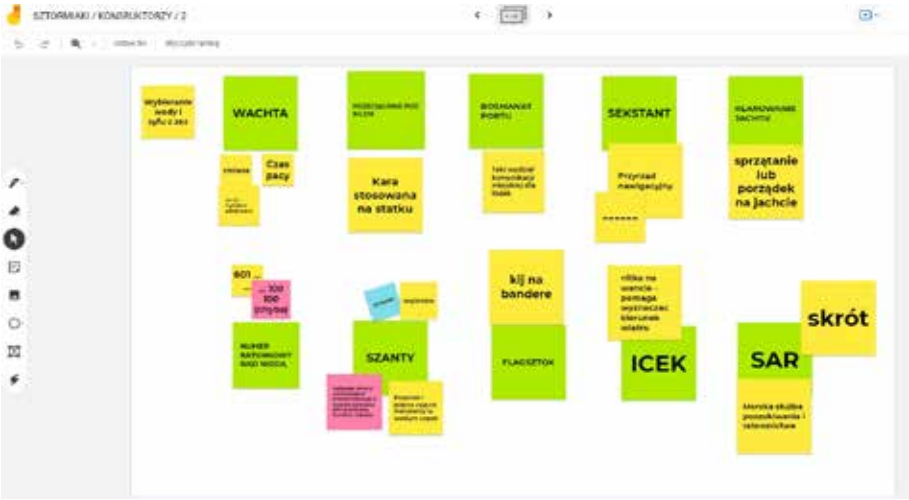
Exercise 2. / duration: 10 minutes / aim: to learn sailing terminology

The instructor prepares the educational resources on Jamboard: sailing terms written on coloured sticky notes.

Sample terms:

term	sample definition
clearing a yacht	tidying a vessel on board, in the cockpit, the cabin, with the coiling of the lines and washing the entire vessel
wimpel	telltale, also called a pennant, a thread or ribbon attached to a shroud that shows the direction of the apparent wind
watch	part of a vessel's crew that is on duty at a particular time
keelhauling	an ancient form of punishment once used on sailing ships, where the condemned would be dragged with a line under the ship from one side of the ship to the other
SAR	Maritime Search and Rescue Service
water rescue number	601 100 100
harbour ad-ministration	maritime office unit in small ports or harbours
shanties	work songs sung on sailboats to synchronise work
flagstaff	a pole on which a flag is hung

The participants work together to try to define the terms using their own knowledge or online resources. The instructor supplements their answers as necessary.



Sample Jamboard illustrating Exercise 2.

Exercise 3. / duration: 25 minutes / aim: to refresh knowledge about inland navigation signs

The instructor prepares a test in Mentimeter that consists of 7 single choice questions and answers. The participants get access to the test via a link uploaded to the Jamboard.

Sample test:

1. The borders of a body of water closed for navigation may be delineated by:

a) a spherical buoy painted yellow
b) a spherical buoy painted red
c) a spherical buoy painted with vertical red and green stripes

2. The sign below means:

a) no watercraft that are not sail and motor powered allowed
b) no launching or bringing watercraft ashore
c) no watercraft used only for sport or recreation allowed

3. The sign below means:

a) go to the right side of the fairway
b) direct the vessel to the side of the fairway that is at portside
c) waterway turns left

4. The north cardinal mark should be passed:
   a) only from the south
   b) from the north, leaving it to the south
   c) from the north, west or east

5. The sign below means:

   a) depth restriction (in feet)
   b) clearance height limit above the water surface (in metres)
   c) speed limit (in knots)

6. The sign below means:

   a) weir near the sign
   b) ferry boat moving independently
   c) ferry boat not moving independently

7. The sign below means:

   a) windsurfing allowed
   b) sailing vessel traffic allowed
   c) motor shipping traffic allowed

More sample questions at:
www.zeglarstwo.waw.pl/tests-zj.htm

The participants receive the results right after answering. Following the test, the instructor discusses the results and explains the most difficult issues.

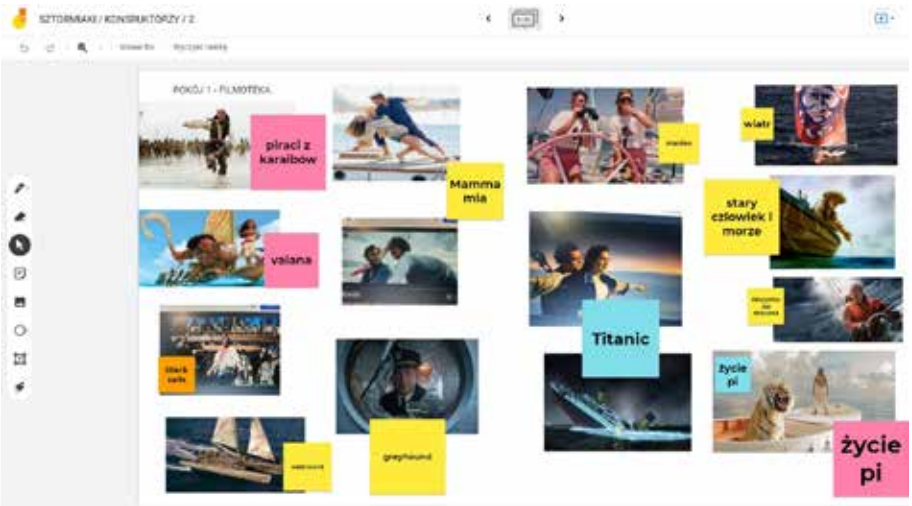
Exercise 4. / duration: 10 minutes / aim: group integration and learning more about maritime movies

The instructor prepares the following educational resources: stills from marine/maritime movies.

Sample films:
Titanic,
Pirates of the Caribbean,
Life of Pi,
Das Boot,
Adrift,
Hunt for the Red October,
Zew morza,
The Mercy.

The participants are split into two groups. Their task is to guess the title of the film presented on the photograph. After the completion of this exercise, the instructor tells the participants about the JachtFilm festival.

Alternatively, the participants may be split into two groups, each of whom prepares materials for their opponents and then the exercise proceeds as above.



Sample Jamboard illustrating Exercise 4.

The student learns/gains:

- the skill to identify, name and mark clouds,
- the Beaufort scale,
- extraordinary weather phenomena,
- the skill to find information online,
- improves the skill to present their obtained knowledge.

Tools:

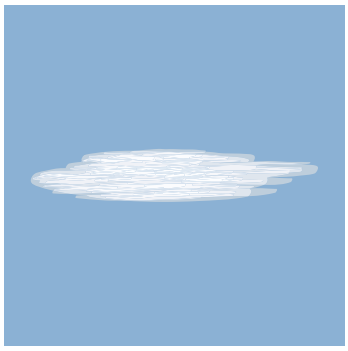
- Jamboard (or any other tool that provides the means for online group work),
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own),
- Youtube (or any other tool that provides the means to play film footage)),
- materials prepared by the instructor (cloud pictures and definitions for exercise 1. Beaufort Scale).

Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

Exercise 1. / duration: 15 minutes / aim: to refresh knowledge of clouds

The instructor prepares the following educational resources: 3 sets of 3 illustrations of clouds, their names and descriptions, placed on 3 different cards on the Jamboard in a scramble.



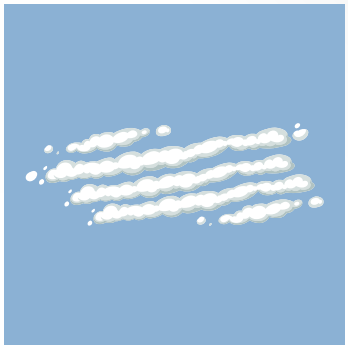
cloud name: **altostratus**

cloud description:
Greyish or blue, ribbed or stringy cloud layer that completely or partially covers the sky. In places it can be so thin that the sun that shines through it can be seen as if it were behind matte glass. Brings rain and snow.

Cloud illustrations
Source: freepik.com

cloud name: **stratocumulus**

cloud description:
Grey or white layer, heap or patch of clouds, almost always having dark parts, consisting of rounded chunks, cylinders etc. Parts of the cloud may or may not be linked to others. Brings intermittent precipitation, forecasts a break in the weather. Often accompanied by a halo effect.

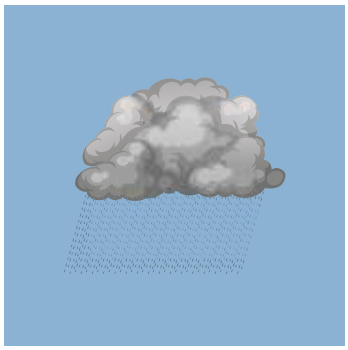


cloud name: **cirrus**

cloud description:
Cloud in the shape of white strings, threads or narrow silky strips. Portends major weather change. May be accompanied by gusty wind. Causes precipitation that does not reach the ground.

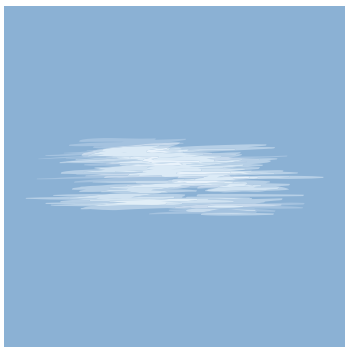
cloud name: **nimbostratus**

cloud description:
Layer of dark-grey uniform clouds. So thick that it completely obscures the sun. A classic raincloud that brings long, abundant and ongoing precipitation.

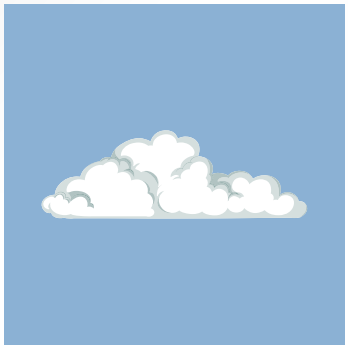


cloud name: **cirrostratus**

cloud description:
A cloud in the form of a translucent cover of clouds with a whitish stringy or smooth appearance that covers the sky completely or partially. The edges of the clouds can sometimes be sharp, although they more commonly have tassels. Often accompanied by a halo effect.

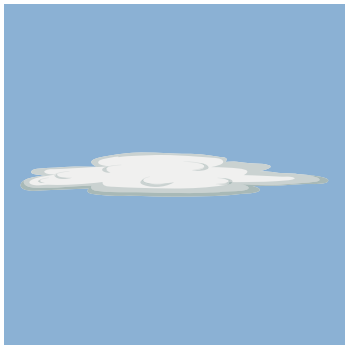


Cloud illustrations
Source: freepik.com



cloud name: **cumulus**

cloud description:
Thick clouds with sharp edges, stretching out vertically in shapes of hills, domes or towers. Their sunlit parts are usually glowing white. They forecast good weather and moderate gusty wind. Watch out for nearby squalls.



cloud name: **stratus**

cloud description:
Grey layer of clouds with a rather uniform base; sometimes occurs in the form of ragged patches. Brings rain and can be accompanied by fog or drizzle before the actual precipitation begins.

cloud name: **altocumulus**

cloud description:
White or grey layer or patch of clouds consisting of broad patches and elongated cylinders that may be separated by strips of clear sky. Forecasts the coming of a cold front.

cloud name: **cirrocumulus**

cloud description:
Occurs most commonly as a thin white patch or layer, consisting of small grain-like bits, which may or may not be connected to one another. Forecasts the coming of a cold front.

The participants work split into groups. Their task is to match the different parts of the scramble and, once that is completed, to present each cloud on the forum.

Cloud illustrations
Source: freepik.com

The next stage of the exercise is to present the forming of a cumulonimbus cloud.

A Cumulonimbus is a billowy storm cloud. Extending vertically, it is very often the source of sudden rain, snow, hail or storms. It is a very large hazard for sailors because of the strong squall in the "front of the cloud" right before the precipitation starts.

Cumulonimbus cloud illustration. Source: freepik.com

Video used during class:
https://www.youtube.com/watch?v=232LFz-aiz4

After watching the material, the instructor moderates a discussion about the cumulonimbus cloud weather phenomenon and the possible threats it may bring.

The participants have learnt how to identify clouds and know what weather consequences each of them bring.

Exercise 2. / duration: 20 minutes / aim: to learn the Beaufort Scale

The instructor prepares educational materials on the Beaufort scale (number – meaning – illustration) in the form of a scramble. The participants are split by the instructor into two groups. Each of the groups' task is to match the scrambled elements. Next, the participants and the instructor check the exercise on the forum, and anything that isn't clear is explained. The participants share their experience of sailing in particular weather conditions in a moderated discussion.

BEAUFORT SCALE					
°B	name	wind effects on land	sea surface condition	wind km/h	illustration
0	calm	smoke rises vertically	sea like a mirror	0–2	
1	light air	slight drift	ripples with appearance of scales are formed	2–5	
2	light breeze	wind felt on face	small wavelets still short but more pronounced; crests have a glassy appearance but do not break	6–11	
3	gentle breeze	leaves on trees in motion	large wavelets; crests begin to break; foam of glassy appearance; perhaps scattered white horses	12–19	
4	moderate breeze	small branches moved	small waves becoming longer; fairly frequent white horses, which break making a sound	20–28	
5	fresh breeze	small trees in leaf begin to sway, gusts of wind	moderate waves taking a more pronounced long form; many white horses are formed; chance of some spray, sea is noisy	29–38	

Source: freepik.com

6	strong breeze	large branches in motion	large waves begin to form; the white foam crests are more extensive everywhere; probably some spray, noise of waves breaking is audible	39–49	
7	moderate gale	whole small trees in motion	sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind; spindrift begins to be seen, sea is loud	50–61	
8	fresh gale	large tree in motion, twigs break off trees, generally impedes progress	moderately high waves of greater length; edges of crests break into spindrift; foam is blown in well-marked streaks along the direction of the wind, sea roars intermittently	61–74	
9	strong gale	structural damage, wind tears off roofs, breaks strong branches	high waves; dense streaks of foam along the direction of the wind; sea begins to roll; spray affects visibility, sea roars	75–88	
10	whole gale	trees uprooted	very high waves with long overhanging crests; resulting foam in great patches is blown in dense white streaks along the direction of the wind; on the whole the surface of the sea takes on a white appearance; rolling of the sea becomes heavy; visibility affected	89–102	
11	violent storm	widespread damage	exceptionally high waves; small- and medium-sized ships might be for a long time lost to view behind the waves; sea is covered with long white patches of foam; everywhere the edges of the wave crests are blown into foam; visibility affected	103–117	
12	hurricane	extreme destruction, e.g. buildings destroyed	the air is filled with foam and spray; sea is completely white with driving spray; visibility very seriously affected	over 118	

Participants have learnt the Beaufort scale and can identify its numbers.

Exercise 3. / duration: 20 minutes / aim: to learn the Beaufort Scale

The participants are split by the instructor into 3 groups.
Each group gets a different meteorological phenomenon to describe:

- Gulf Stream,
- Maelstrom,
- St Elmo's Fire.

The participants' task is to prepare a presentation on the phenomenon they are given. The presentation should cover all cultural sources (literature, film, iconography, painting, etc.), maps and scientific sources.

Homework: finish the work and prepare for presenting it on the forum.

The participants have learnt how to find information on their own and present it in an interesting manner. They also know the phenomenon's place in culture.

Sample Jamboard illustrating Exercise 3.

Sample Jamboard illustrating Exercise 3.

The student learns/gains:

- knowledge about historic sailing watercraft,
- the skill to identify historic sailing watercraft,
- consolidates English sailing and boatbuilding vocabulary,
- mind map making technique.

Tools:

- Jamboard (or any other tool that provides the means for online group work),
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own),
- Kahoot (or any other software that provides the means for running a test/ quiz and checking its results).

Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

Exercise 1. / time: 10 min / aim: Homework checking

The participants present their Exercise 3 homework from lesson plan 5. The instructor fills in any information gaps and answers questions.

Exercise 2. / time: 15 min / aim: to refresh knowledge about historic sailing watercraft

The instructor prepares the following educational resources: pictures/ illustrations of 5 historic sailing watercraft, of different structures and built using different techniques, and puts them on separate Jamboards.

Sample picture for exercise 2, illustrating a 16th-century sailing ship

Sample picture for exercise 2, illustrating a 16th-century sailing ship

Sample picture for exercise 2, illustrating a sailing ship from the 18th/19th century

Sample picture for exercise 2, illustrating a sailing ship from the 18th/19th century

The participants work split by the instructor into groups of two. Each pair is to determine the century when the vessel was made. Upon completion, the instructor sums up the exercise, recalling the method introduced in the weekend classes.

Exercise 3. / time: 10 min / aim: reviewing the acquired knowledge

The instructor uses Kahoot to prepare a test consisting of 12 closed-ended multiple-choice questions and answers. The range of material covers the already introduced sailing and boatbuilding terminology (see: lesson plan 2, Exercise 1; lesson plan 3, Exercise 3).
The participants take the test in real time and receive their results immediately after they have completed it. The instructor discusses the results and explains any particularly difficult matters.

Sample test:

1. A Bollard is a:
   a) węzeł
   b) kambuz
   c) poler
   d) wiosło

2. A Spruce is a:
   a) sosna
   b) machoń

c) dąb
d) świerk

3. A Berth is a:
a) keja
b) pomost
c) zanurzenie
d) port

4. A Windward is a:
a) nawietrzna
b) zawietrzna
c) bajdewind
d) hals

5. A Bilge is a:
a) zęza
b) mostek
c) balast
d) miecz

6. An Anchor is a:
a) ponton
b) kotwica
c) bosak
d) wiosło

7. A Zawietrzna is a:
a) winward
d) leeward
c) backward
d) sideward

8. A Kambuz is a:
a) bridge
b) bilge
c) galley
d) anchor

9. A Fok is a:
a) mizzan
b) jib
c) gaff
d) seal

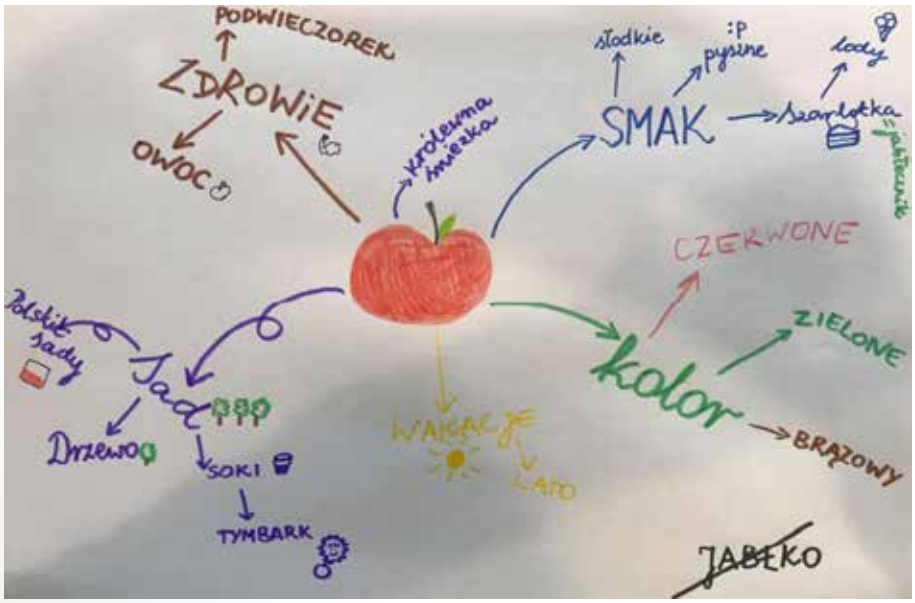
10. A Rumpel is a:
   a) stern
   b) stay
   c) tiller
   d) yoke

11. A Stępka is a:
   a) keel
   b) gaff
   c) bow
   d) stern

12. A Pawęż is a:
   a) sternpost
   b) transom
   c) capstan
   d) dinghy

Exercise 4. / time: 20 min / aim: learning using the mind map method

The instructor prepares the following educational resources: a mind map as an example to introduce this method. Together with the participants, the instructor makes a basic mind map that concerns boatbuilding and needs to be supplemented with notions from four categories. With such a template, each participant makes their own detailed mind map, using the knowledge they have gained so far. Following the exercise, the instructor discusses four selected maps, and the rest are uploaded to Trello.



Mind map made by the instructor

Homework: prepare your own mind map.

The student learns/gains:

- about kinds of rigging,
- about types of rigging,
- about the reasons for maritime disasters,
- logical thinking skills.

Tools:

- Jamboard (or any other tool that provides the means for online group work),
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own).

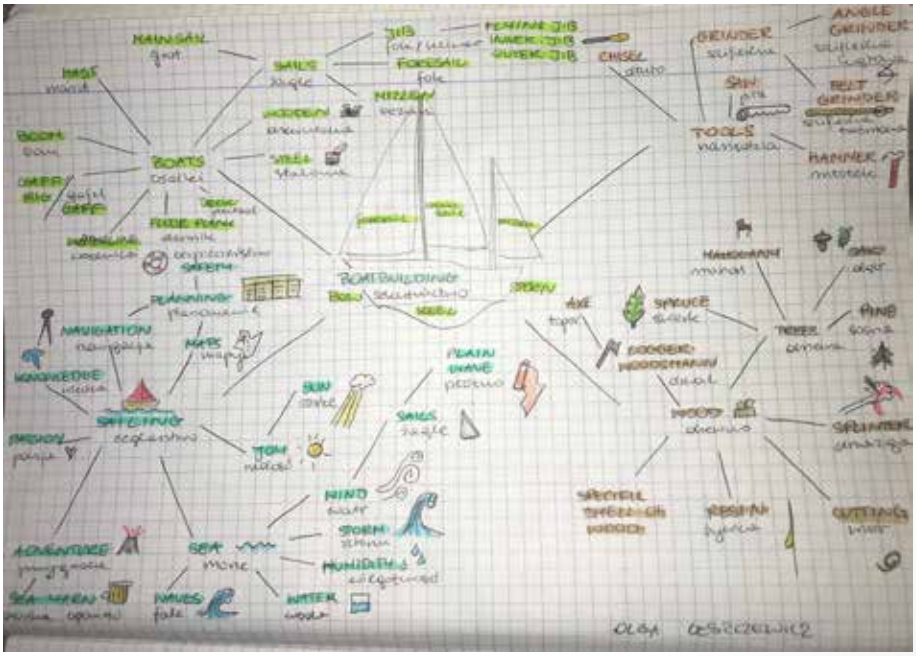
Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

Exercise 1. / time: 10 min/ aim: checking homework

The instructor begins the exercise by talking with the participants about the map making process and about the wildest associations that came to their minds when they did it. Based on each other's homework, the participants exchange information and trivia.

Sample work by a project participant



Sample work by project participant

This exercise is to verify the participants' reliability and commitment and how well they understand the new learning method. It is important that the participants have room to display their creativity and out of the box thinking, which can motivate them to work further.

Exercise 2. / time: 10 min/ aim: integration

The instructor prepares resources for group integration, consisting of puzzles and word games put on Jamboard in real time.

Sample puzzles:

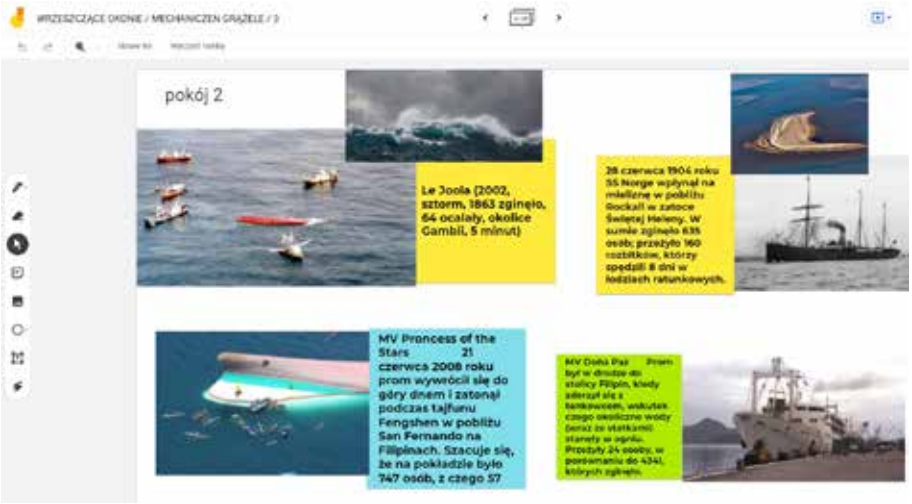
1. Spicy holidays
   Answer: Christmas
2. Field with checks, mind trap
   Answer: survey, quiz, questionnaire
3. There are 5 people in a room, some of them are lying, some of them are telling the truth. How many are lying when they are asked "How many liars are among you?" Replies included: "One," "Two," "Three," "Four" and "Five."
   Answer: four

The task is to activate the participants and to stimulate their perceptiveness and associative abilities. The game stimulates logical thinking. It is important to focus on participants who are withdrawn and are reluctant to take part in the exercise, and try to get them actively involved.

Exercise 3. / time: 10 min/ aim: to learn about the reasons for maritime disasters

The participants are split by the instructor into two groups. Their task is to look online to find the reasons for maritime disasters and their descriptions. The resources are uploaded to dedicated Jamboard sheets. The next step is to discuss the reasons for and consequences of disasters on the forum.
The instructor moderates the discussion about whether the forces of nature can be so uncontrollable that tragedy strikes, or whether it is human error that plays a greater role in disasters.

Sample Jamboard illustrating Exercise 3.

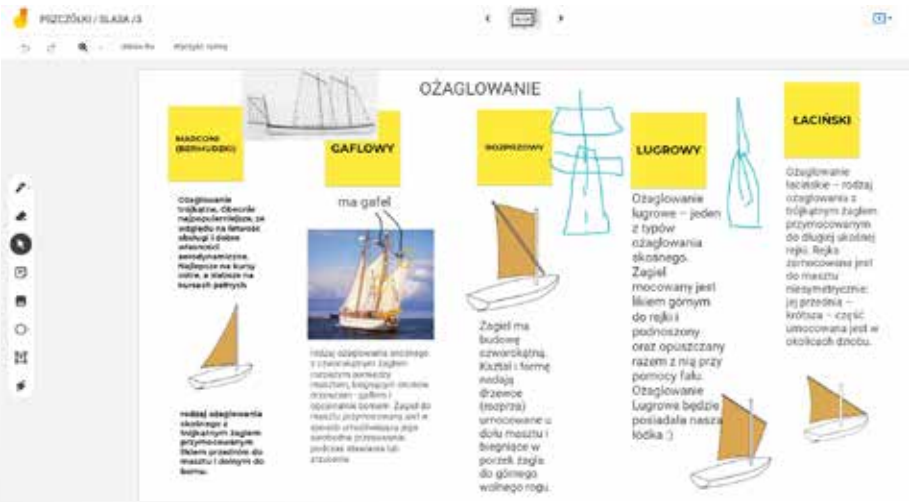


The aim of the exercise is to develop a habit of reliably looking for information in the available sources and the ability to verify it.
The exercise is done within the context of the classes in lesson plan 5 (meteorology), theoretical and based on exercise 2. It also enhances logical thinking skills and develops cause and effect association.

Exercise 4. / time: 10 min/ aim: learning about kinds of rigging

The instructor prepares educational resources concerning the kinds of rigging and uploads them to dedicated Jamboard sheets. The participants work split into groups of two. Their task is to go online and find illustrations that show designated sails and describe them.
Next, the group representative presents their type of rigging to the rest and the instructor supplements their information.

rigging type	definition	illustration
Marconi/ Bermuda	Triangular rigging where the sail is spread between the mast and the boom. It is the most popular kind of rigging today.	
Gaff	Rigging where a quadrangular sail is spread on the side of the mast between a horizontal boom and a diagonal gaff.	
Spritsail	A rigging where a quadrangular sail is spread on the side of the mast and spread out by a sprit which runs from the mast (at the bottom) diagonally across the sail to its corner (at the top).	
Lug sail	Rigging, where a quadrangular sail is spread between the yardarm at the top and the boom at the bottom. The yardarm is tied to the mast diagonally and asymmetrically.	
Lateen	Triangular rigging where a sail is spread below a long diagonal yardarm fixed at one end to the bow area.	



Sample Jamboard illustrating Exercise 4.

The goal of this exercise is to introduce new boat structure terminology and prepare the participants for sailing camp and sailing on sailing watercraft. Furthermore, it improves fluency in finding source information and its verifying, teamwork skills and presenting one's results on a forum.

Exercise 5. / time: 10 min/ aim: learning about types of rigging

The instructor prepares the following educational resources: rigging type names and their definitions scrambled. The participants are split by the instructor into two groups. Each group is to match the names with the definitions. Looking for examples of watercraft with each type of rigging (in photographs, videos, illustrations) may be an additional component of this exercise.

rigging type	definition
jawl	Rigging that consists of two masts where the back one is behind the steering device.
ketch	Rigging that consists of two masts where the back one is in front of the steering devic.
cat	Rigging that consists of one mast and one sail.
cutter	Rigging that consists of one mast, the mainsail and two or more front sails fixed on separate stays.
sloop	Rigging that consists of one mast and two sails, the mainstay and the foresail (jib). The most popular rigging today.
schooner	Rigging consisting of two masts where the back one is the mainstay.

The student learns/gains:

- about the sail structure,
- about the division of sails,
- about the types of sails,
- creative thinking skills.

Tools:

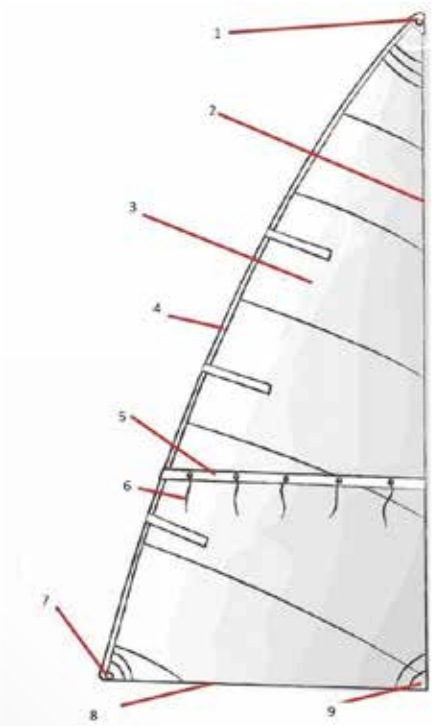
- Jamboard (or any other tool that provides the means for online group work),
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own),
- materials prepared by the instructor (picture of a mainsail in exercise 1, picture of a sailboat in full flag gala in exercise 3.).

Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

Exercise 1. / time: 15 min/ aim: learning sail structure

The instructor prepares the following educational resources: an illustration of the mainsail that highlights its main components uploaded to Jamboard.



Sample picture of a mainsail for exercise 1.

The participants are split by the instructor into two groups. Their task is to fill in the missing components, name the parts of the sail and list the materials used to make sails. Once the fields are filled in, the instructor checks the exercise on the forum and supplements any missing information.

Answers:
A sail is a type of wind propulsor used to propel a sailing vessel. It is a synthetic sheet of cloth, affected by the wind to cause aerodynamic force. A set of sails is a rigging.

Materials used to make sails: kevlar, dacron, tergal, tetotron, terylene (polyester).

Sail structure:
1. head – a sail's upper corner to which the halyard is connected,
2. luff – edge of a sail running along the mast,
3. panel – strips of cloth,
4. leech – edge of a sail running along the back,
5. cringles – fittings that strengthen the sail where the reefs are,
6. reef point – lines for tying the reefed part of the sail,
7. clew – back corner of a sail to which the sheets are attached,
8. foot – edge of a sail running along the boom,
9. tack – edge of a sail at the point where the tack is attached.

The goal of this exercise is to learn the structure of the sail and name its components. Additionally, tha participants practice group work and fluency in presenting their achievements.

Exercise 2. / time: 15 min/ aim: learning the division of sails

The instructor delivers a mini-lecture about the division of sails by the way they are attached (fore-and-aft, free standing and staysails), use (working sails, extra sails known as light weather sails, storm sails and reefed sails) and shape (triangular, quadrangular and spherical sails). The lecture is combined with a discussion with the participants who use the knowledge they have gained so far to supplement the knowledge provided by the instructor.

There are many kinds of sails and every sailmaking shops uses a different division and terminology. Below are the most popular one divided by:

1. Method of attachment:
a. fore-and-aft sails – e.g. mainsail, mizzen – mainly propelling sails attached to the mast with the luff,

b. free standing sails – e.g. spinnaker, gennaker – sails attached with the tacks, without the use of the edges,
c. stay sails – e.g. jib (foresail), lapper, genoa – sails raised on stays.

2. Use:
a. working sails – primary set of sails used to move and manoeuvre in wind conditions anticipated by the vessel's designer,
b. reefed sails – set of sails used to move and manoeuvre in difficult wind conditions (7–8 on the Beaufort scale),
c. storm sails – set of sails used to move and manoeuvre in very difficult wind conditions (over 8 on the Beaufort scale),
d. extra sails, known as a light weather sails, used to move and manoeuvre in very good wind conditions. These include spinnakers, topsails and gennakers.

3. Shapes:
a. triangular sails,
b. quadrangular sails,
c. spherical sails.

Sample Jamboard illustrating Exercise 2.

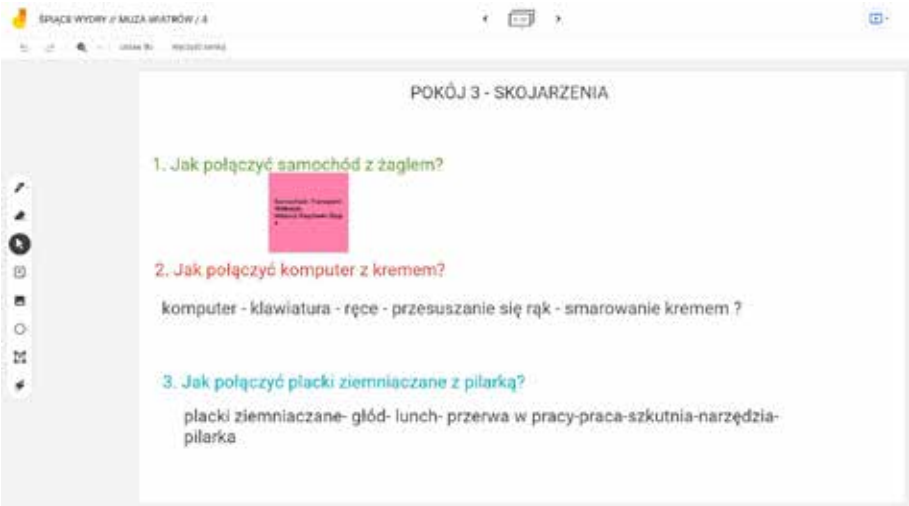
The goal of this exercise is to introduce new information about the division of sails. The participants obtain knowledge that is vital to practical sailing.

Exercise 3. / time: 15 min/ aim: integration

The instructor prepares an association game: “The World’s Shortest Chain.” The participants are split into three groups. Their task is to come up with the shortest possible chain of associations to combine two random words.

Sample chains:
How can you associate Norway with pudding?,
How can you associate a boat with Santa Clause?,
How can you associate Neptune with a rose?,
How can you associate a car with a sail?,
How can you associate potato pancakes with a sawing machine?.

Sample Jamboard illustrating Exercise 3.



The object of the game is to create a relaxed atmosphere after the hard class, because the material discussed in exercises 1–3 was new to the participants. Due to the accumulation of notions, terms and the specifics of the issue, carrying out this exercise to help integrate the group will end the class on a positive note.

The student learns/gains:

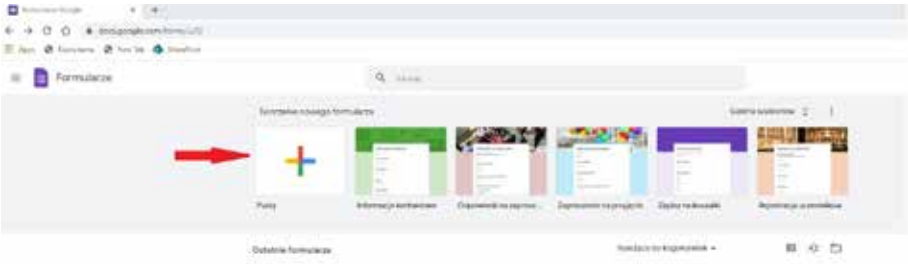
- reinforces the knowledge learned in the earlier classes

Tools:

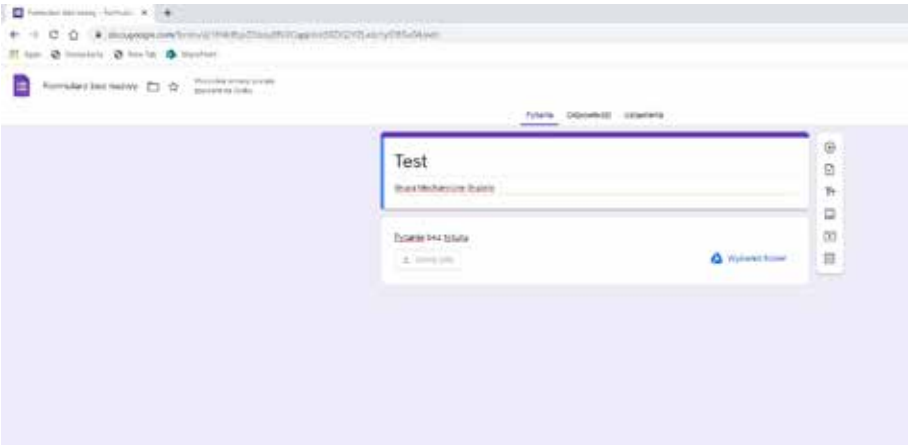
- Jamboard (or any other tool that provides the means for online group work),
- Google Forms (or any other software for testing/quizzing).

How to make a test using Google Forms?

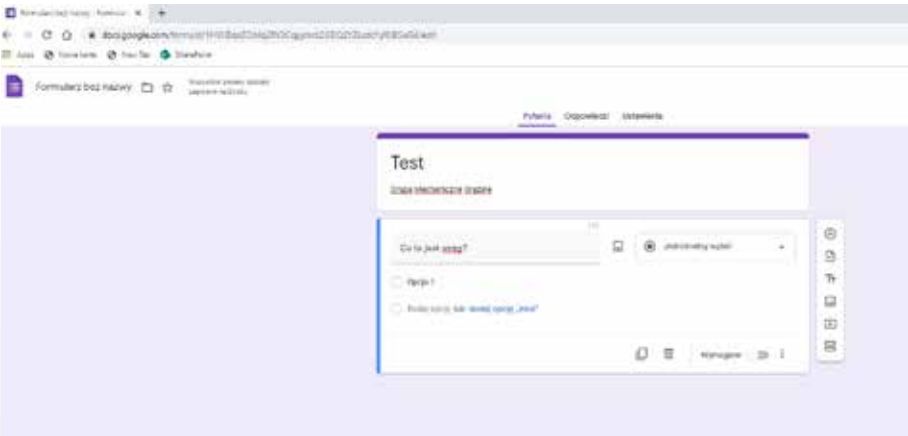
1. Open Google Forms in any browser and click “Blank quiz.”



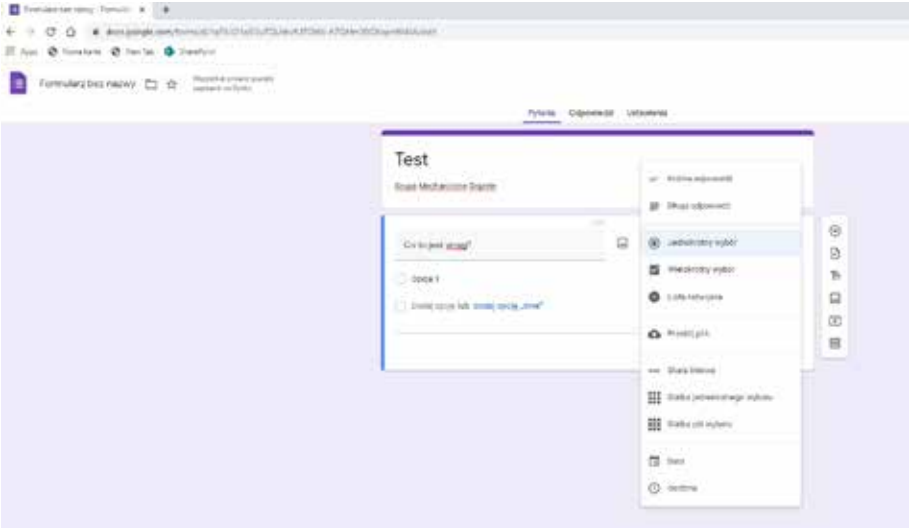
2. Write in the form’s name. Optionally, you may add its description.



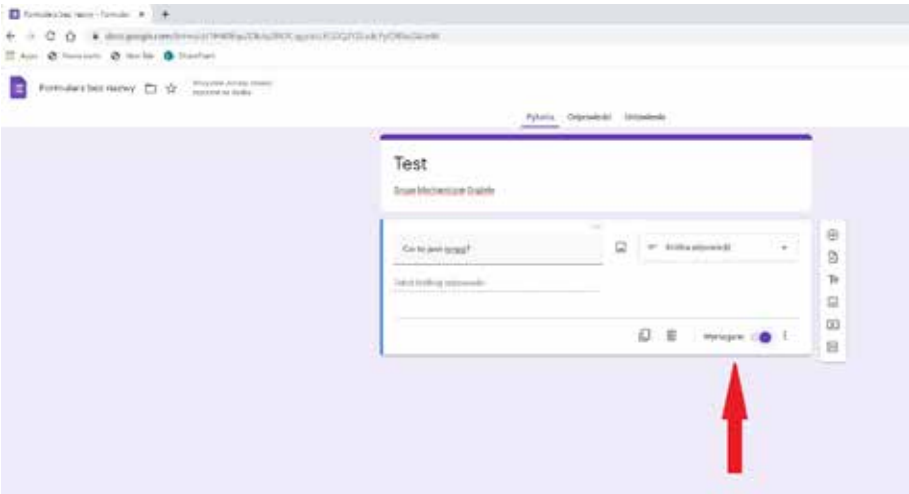
3. Begin adding questions. You can edit a question by clicking “Untitled Question.”



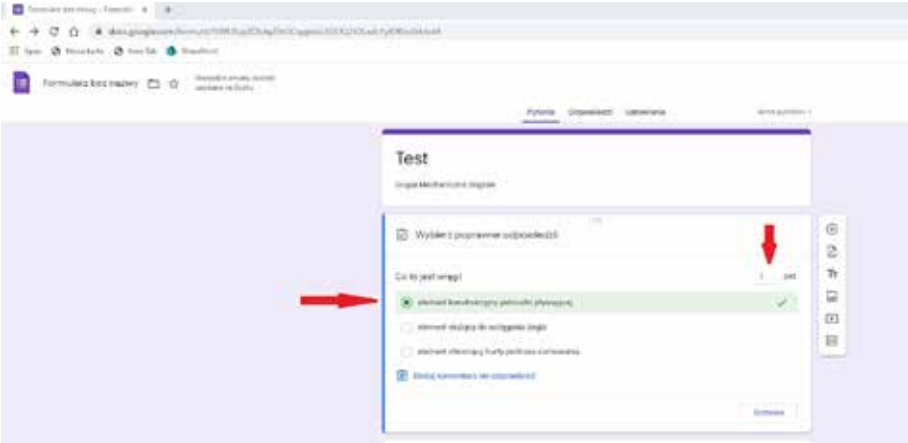
4. Click “Single choice” to open a menu of answer options.



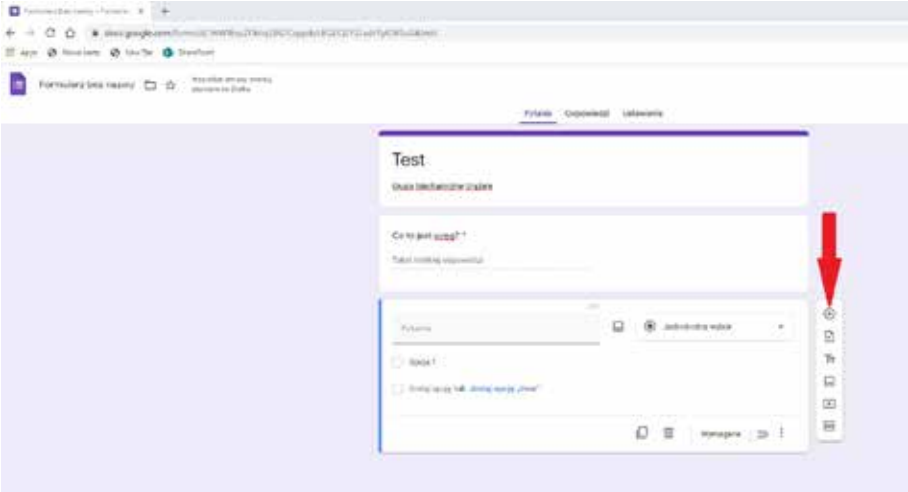
5. After clicking the desired type of answers, confirm your choice by clicking “Required.”



6. In order to add scoring, click “Answer Key,” then select the correct answer and enter the number of points. Accept by clicking “Done.”

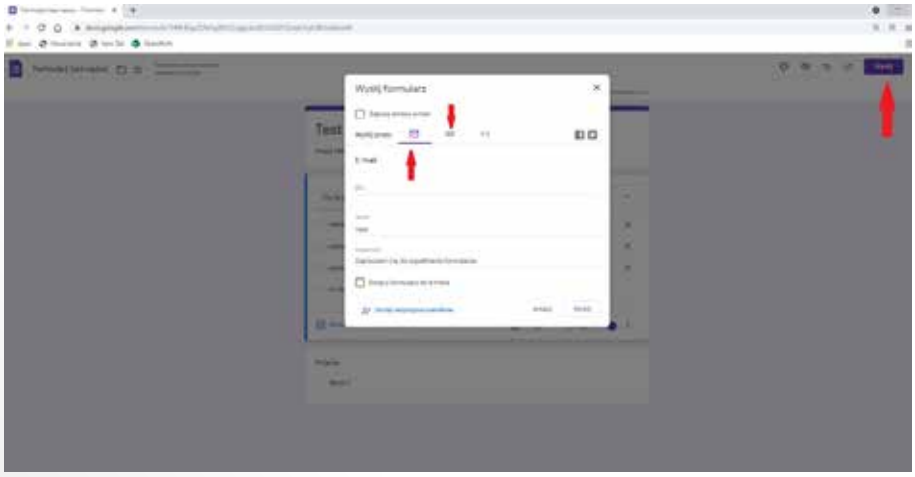


7. Click “+” in order to add the next question.



Repeat until the test is complete.

8. The test may be sent via e-mail or link. In order to do this, click “Send” and then choose the option you want to send the test with.



Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

Exercise 1. / time: 45 min/ aim: checking what we have learned

The instructor uses Google Forms to prepare a test of the entire material covered in the classes, both theoretical and the boatbuilding workshop. The questions cover both the topics discussed by the instructor and those raised by the participants.

The goal of this exercise is to check what the participants have learned, but also to encourage them to further their studies. The results are dealt with in a group discussion moderated by the instructor, without pointing out any participant. It is important not to shame or embarrass anyone. This way, the participants will be able to draw conclusions and correct mistakes themselves.

Sample tests:

Group 1

Screaming Perches / Mechanical Lilies

*Required

1. E-mail address *

2. Close reach is a course where we feel the wind: **1 point**
Zaznacz tylko jedną odpowiedź.

- [ ] perpendicularly to the broadside
- [ ] at an angle to the bow
- [ ] at an angle to the stern
- [ ] straight from the stern

3. Tiller means what in English: **1 point**
Select only one answer.

- [ ] ster
- [ ] rumpel
- [ ] płetwa sterowa
- [ ] jarzmo

4. Explain what a GIG is. **2 points**

A GIG is a 18th-century rowing/sailing boat used to transport valuable merchandise and people from sailboat to shore.

5. Used to raise the sails and mobile rigging parts on a vessel. What component is this? **1 punkt**
Select only one answer.

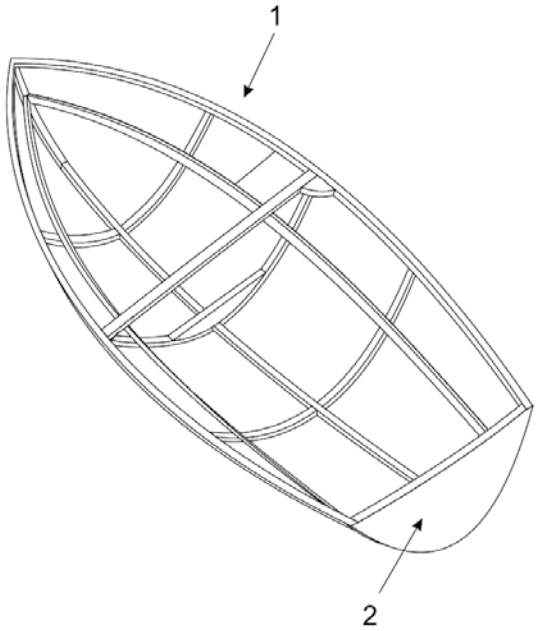
- [ ] sheet
- [ ] spring
- [ ] breast
- [ ] halyard

6. Name a minimum three health and boatbuilding shop safety rules. **3 points**

1. wear protective clothing
2. put tools in their place
3. listen to the boatbuilders

7. Name the parts of a boat skeleton. **2 points**

Author: Lips – Independent work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=19464237



1. stringer
2. transom

8. Explain what a designed waterline is. **1 point**

A waterline is a component of a theoretical drawing of a vessel made by the builder at the hull design stage. In a lateral projection it is a straight line.

9. A jibe is a: **1 point**

Select only one answer.

- [ ] changing hack by passing the wind's eye astern
- [ ] changing hack from a close reach do broad reach course
- [ ] changing hack passing of the wind's eye with the bow

10. What is this sign? **1 point**

Select only one answer.

- [ ] port near
- [ ] ferry-boat not moving independently
- [ ] mandatory parking

11. What is the form of government in Norway? **1 point**

Select only one answer.

- [ ] republic
- [ ] absolute monarchy
- [ ] constitutional monarchy
- [ ] parliamentary monarchy

12. Name the groups taking part in Project Szkutnia. **6 points**

Select all the correct answers.

- [ ] Little Bees
- [ ] Anoraks
- [ ] Sleeping Otters
- [ ] Designers
- [ ] Oilskins
- [ ] Dancing Codfish
- [ ] Tango
- [ ] Wind Muse
- [ ] Singing Otters
- [ ] Salsa

13. Give the English translation of the word “fok.” **1 point**

jib

14. The part of the crew who is on duty at a certain moment is called which watch: **1 point**
Select only one answer.

- [ ] galley watch
- [ ] port watch
- [ ] first watch
- [ ] navigational watch

15. Match the Polish words with their English equivalents. **5 points**
Select only one answer in each row.

	plating	broad reach	fender	mizzan	ballast keel
bezan				✔	
poszycie	✔				
balast stały					✔
baksztag		✔			
odbijacz			✔		

16. Change the measure from the imperial to the metric system: 3 feet, 7 inches. **1 point**

1,092 m

17. The capital of Norway is: **1 point**
Select only one answer.

- [ ] Tromso
- [ ] Bergen
- [ ] Oslo
- [ ] Trondheim

18. A wind that is caused by meteorological conditions and landform features is called a: **1 point**
Select only one answer.

- [ ] boatspeed wind
- [ ] apparent wind
- [ ] true wind

19. Give the definition of tack: **1 point**

Placement of a wind-propelled vessel relative to the wind direction. There is a starboard tack and a portside tack.

20. A health and safety rule at a boatbuilding shop is: **1 point**
Select only one answer.

- [ ] wear protective clothing
- [ ] walk barefoot
- [ ] shout to each other
- [ ] leave your tools at your workstation

21. A ruler is a: **1 point**
Select only one answer.

- [ ] metric system
- [ ] draughting tool
- [ ] line on the ship's side showing its draught

22. What are the components of a frame? **1 point**

rib, floor plank, beam

23. Rescue operations at sea are performed by: **1 point**
Select only one answer.

- [ ] SAR
- [ ] Harbour Master
- [ ] Waterway Police

24. Another name for a stem is **1 point**

Select only one answer.

- [ ] bow
- [ ] bow ballast
- [ ] transom
- [ ] stem

25. Name the Water Rescue Number: **1 point**

601 100 100

26. Which watch customarily services the stern lines and sails? **1 point**

Select only one answer.

- [ ] watch I
- [ ] watch II
- [ ] watch III
- [ ] watch IV

27. In case of fire in a boatbuilding shop you should: **1 point**

Select only one answer.

- [ ] drop everything and run for the exit
- [ ] do nothing
- [ ] alert others inside and the fire department without causing a panic
- [ ] try to put the fire out yourself

28. What does ACI stand for? **1 point**

Atlantic Challenge International

Label the pictures:

29. The following picture shows a: **1 point**

plane

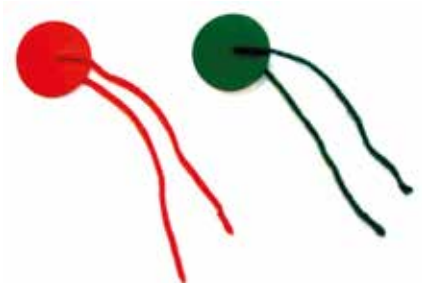
30. The following picture shows a: **1 point**

capstan

31. The following picture shows a: **1 point**

jig saw

32. The following picture shows a: **1 point**



telltale / pennant

source: www.bosch-professional.com/pl/

33. The following picture shows a: **1 point**

sawing machine

34. The following picture shows a: **1 point**

bow

Group 2

Sleeping Otters /Wind Muse

*Required

1. E-mail address*

2. A run is a course where we feel the wind: **1 point**

Select only one answer.

- [ ] perpendicularly to the sidewall
- [ ] diagonally to the bow
- [ ] diagonally to the stern
- [ ] straight from the stern

3. Explain what a GIG is **2 points**

A GIG is a 18th-century rowing/sailing boat used to transport valuable merchandise and people from sailboat to shore.

4. Main sail in Polish is: **1 point**

Select only one answer.

- [ ] grot
- [ ] fok
- [ ] gafel
- [ ] bezan

5. What component is used to raise the sails and mobile rigging parts on a vessel? **1 point**

Select only one answer.

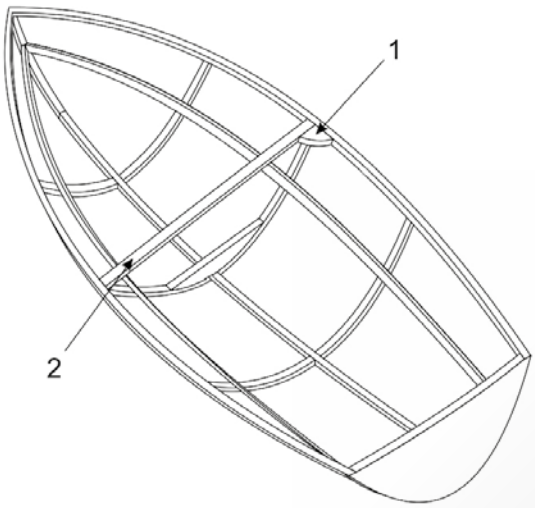
- [ ] sheet
- [ ] breast
- [ ] spring
- [ ] halyard

6. Name at least three examples of breaking health and safety rules in a boatbuilding shop: **3 points**

1. running
2. shouting
3. not wearing protective clothing

7. Name the parts of a boat skeleton. **2 points**

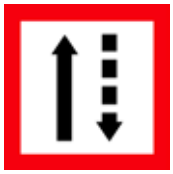
Author: Lips – Independent work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=19464237



1. knee
2. beam

9. What is this sign? **1 point**

Select only one answer.



- [ ] Keep to the side of the fairway on your starboard side
- [ ] Keep to the side of the fairway on your port side
- [ ] Pass to the side of the fairway on your port side

10. What is the form of government in Norway? **1 point**

Select only one answer.

- [ ] republic
- [ ] absolute monarchy
- [ ] constitutional monarchy
- [ ] parliamentary monarchy

11. Explain what a hull's moulded lines are. **1 point**

Lines on a technical drawing with an outline of a sailing vessel's hull. Marked in three projections: end, cross-section and bottom view.

12. Name the groups taking part in Project Szkutnia. **6 points**
Select all the correct answers.

- [ ] Little Bees
- [ ] Anoraks
- [ ] Oilskins
- [ ] Mechanical Lilies
- [ ] Screaming Perches
- [ ] Dancing Codfish
- [ ] Tango
- [ ] Designers
- [ ] Singing Otters
- [ ] Salsa

13. Give the English translation of the word "jarzmo:" **1 point**

yoke

14. Part of the crew on duty during a yacht's stay at port is called a: **1 point**
Select only one answer.

- [ ] anchor watch
- [ ] port watch
- [ ] mooring watch
- [ ] navigational watch

15. Match the Polish words with their English equivalents. **5 points**
Select only one answer in each row.

	jib	sternframe	tiller	plating	stay
tylnica		✔			
poszycie				✔	
sztag					✔
rumpel			✔		
fok	✔				

16. Change the measurement from the imperial to the metric system: 5 feet, 4 inches. **1 point**

1.625 m

17. What is SAR? **1 point**

Sea Search and Rescue Service

18. Which country does Norway share a sea border with? **1 point**
Select only one answer.

- [ ] Sweden
- [ ] Finland
- [ ] Russia
- [ ] Denmark

19. Wind directly affecting the sail and felt by the sailors on a moving yacht is: **1 point**
Select only one answer.

- [ ] boatspeed wind
- [ ] apparent wind
- [ ] true wind

20. Standardisation is: **1 point**
Select all the correct answers.

- [ ] developing and implementing standards
- [ ] detailed regulations concerning everything that has to do with making a technical drawing
- [ ] a generally accepted rule or procedure in a given field

21. A boatbuilding shop health and safety rule is: **1 point**
Select only one answer.

- [ ] wearing protective clothing
- [ ] walking barefoot
- [ ] shouting to each other
- [ ] leaving tools at your workstation

22. What are the components of a frame? **1 point**

rib, floor plank, beam

23. The maritime office unit in small ports or harbours is: **1 point**
Select only one answer.

- [ ] SAR
- [ ] Harbour Master's office
- [ ] Harbour administration

24. Another name for Pennant is: **1 point**
Select only one answer.

- [ ] anchor line
- [ ] telltale
- [ ] transom
- [ ] stem

25. Name the water rescue number: **1 point**

601 100 100

26. Which watch customarily services the bow lines and sails during manoeuvres? **1 point**
Select only one answer.

- [ ] watch I
- [ ] watch II
- [ ] watch III
- [ ] watch IV

27. In case of fire in a boatbuilding shop you should: **1 point**
Select only one answer.

- [ ] drop everything and run for the exit
- [ ] do nothing
- [ ] alert others inside and the fire department without causing a panic
- [ ] try to put the fire out yourself

28. What does ACI stand for: **1 point**

Atlantic Challenge International

Caption the pictures:

29. The following picture shows a: **1 point**

source: www.hafen.pl/

machine tool

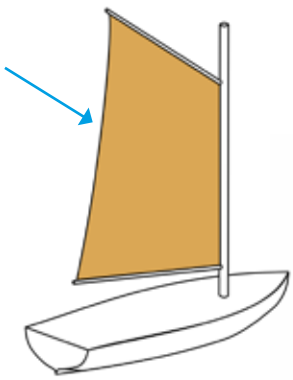
30. The following picture shows a: **1 point**

fender

31. The following picture shows an: **1 point**

angle grinder

32. The following picture shows a: **1 point**



gaff

33. The following picture shows a: **1 point**

chisel

34. The following picture shows a: **1 point**

stern

Exercise 2. / time: 10 min/ aim: integration

The instructor prepares the following educational resources: emoticons that give a clue to film titles that the participants can guess.

Sample tasks:

🌴🏐 – "Cast Away"

🧙🧝💍🌋 – "Lord of the Rings"

🔎🐠 – "Where is Nemo?"

The goal of this exercise is to get the participants to relax after the test and bring some fun to the class.

The student learns/gains:

- classification of seafarer grades,
- classification of radio operator licenses,
- the skill to read with comprehension,
- refreshes knowledge about ship registration.

Tools:

- Jamboard (or any other tool that provides the means for online group work),
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own).

Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

Exercise 1. / time: 10 min / aim: to refresh knowledge

The instructor prepares the following educational resources: a test with 10 closed-ended questions (TRUE/FALSE answers) on Kahoot.
The range of material covers the theoretical classes concerning ship registration regulations. The participants receive their results directly after they answer. When the test is completed, the instructor discusses the results and explains the issues that proved the most difficult.

Sample test:

1. A recreational yacht is a vessel for sport or recreation purposes for no more than 12 passengers in the ordinary course of business.
   TRUE/FALSE
2. A ship inspection includes internal and external visual inspection.
   TRUE/FALSE
3. Yacht classification and construction regulations consist of 7 parts.
   TRUE/FALSE
4. Design categories include four subcategories: oceanic, seagoing, coastal, sheltered water.
   TRUE/FALSE
5. Category B covers watercraft for sailing in coastal waters, large bays, lagoons, lakes and rivers with winds up to 8 on the Beaufort scale inclusive and a significant wave height of up to 2 m inclusive.
   TRUE/FALSE
6. A GIG boat must be registered.
   TRUE/FALSE

7. A survey of a ship is an inspection by an organisation in order to confirm compliance with the classification regulations for granting a yacht certificate.
   TRUE/FALSE
8. A yacht class is a compliance of a yacht's design, execution and condition (of its hull, sail equipment, machine devices, equipment installation) with the requisite regulations.
   TRUE/FALSE
9. A trimaran is a vessel whose main hull is connected to two side hulls with a strengthening structure.
   TRUE/FALSE
10. Registration is mandatory for:
    1. Watercraft dedicated solely for rallies and sport competitions, having a rating class and a valid certificate issued by a Polish sport association or the competent body of the yacht's flag state and racer rowboats.
    2. Watercraft propelled solely by human muscle.
    3. Surfboards, windsurfing boards or other similar watercraft.

    TRUE/FALSE

The goal of this exercise is to recall the most important information from the theory classes on the regulations and ship registration. The questions should be relatively easy and concern basic content. The aim of this task is not to check the participants' knowledge but to refresh information and introduce them to the online class topic.

Exercise 2. / time: 45 min / aim: to learn about sailing and radio operator qualifications

The instructor prepares the following educational resources: The laws:
http://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20130000460/O/D20130460.pdf
https://eli.gov.pl/api/acts/DU/2015/99/text/I/D20150099.pdf
http://www.akm.gda.pl/index.php?cat=gmdss

The participants are split into two groups. Each of them receives via Trello excerpts from the Polish Journal of Laws that determine the sailing qualifications for skippers, masters (group 1) and radio operator qualifications and radio licences (group 2). Group 2 also become acquainted with materials concerning Short Range Certificates (www.akm.gda.pl/index.php?cat=gmdss). The participants' task is to read the texts and to list the most important information in points concerning the qualifications mentioned above. Next, the instructor checks the participants' work and explains any inaccuracies.

Sample Jamboard illustrating Exercise 2.

Sample Jamboard illustrating Exercise 2.

The goal of this exercise is to deepen the participants' knowledge about law, teach them to read laws and find the most important information in them. Another advantage of this exercise is to improve the skill to communicate a concise and clear message based on the obtained information.

The student learns/gains:

- how to sew sails,
- refreshes boatbuilding shop health and safety rules,
- refreshes knowledge concerning sail structure,
- how to put together a boatswain's toolbox.

Tools:

- Jamboard (or any other tool that provides the means for online group work),
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own),
- Youtube (or any other tool that provides the means to play film footage).

Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

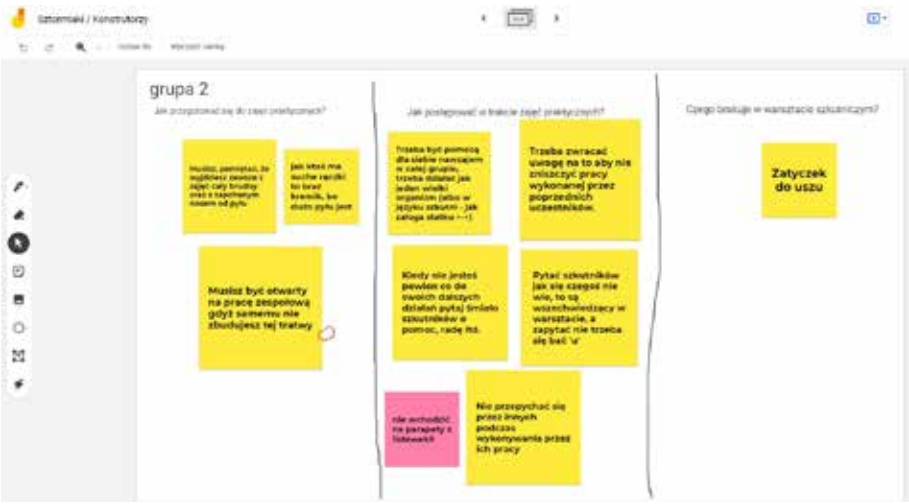
Exercise 1. / time: 20 min / aim: learning to sew sails

Before class, the instructor prepares a Jamboard with a table with three columns:

1. How do we prepare for practical classes?
2. How do we proceed during practical classes?
3. What is missing at the boatbuilding shop?

The participants work divided into groups by the instructor.
The participants' task is to complete the table using their earlier experience at the boatbuilding shop. Once the work is completed, the issue is discussed on the forum, with the discussion moderated by the instructor.

Sample Jamboard illustrating Exercise 3.



The aim of this exercise to activate the participants and to get their opinions on the classes at the boatbuilding shop. With this form of the exercise, the participants frankly say what they think, without feeling that their opinion might lead to repercussions from the instructors or organisers.

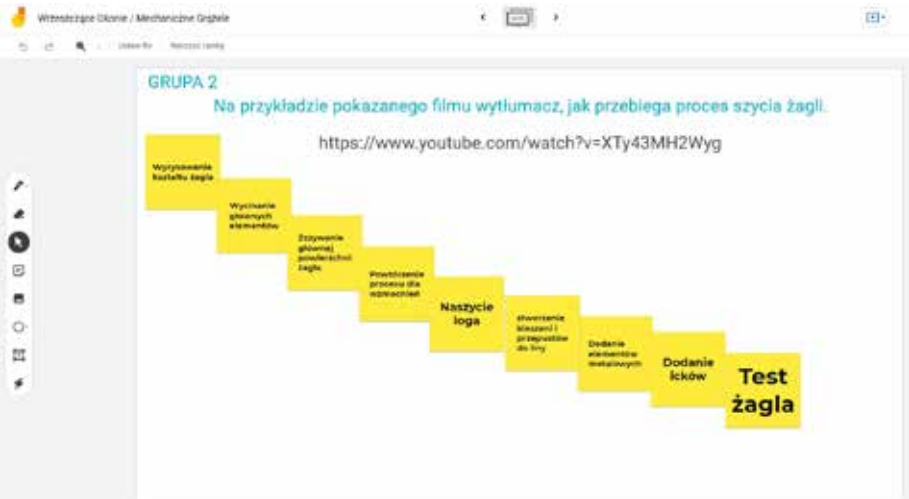
Exercise 2. / time: 15 min / aim: learning to sew sails

The instructor prepares the following educational resources: a video of how to sew sails.

Video used during class:
https://www.youtube.com/watch?v=XTy43MH2Wyg

The participants are split by the instructor into two groups. They receive the link and watch the video together. Their task is to describe the sail-making process, determine what type of sail was made and what its components are based on this video.

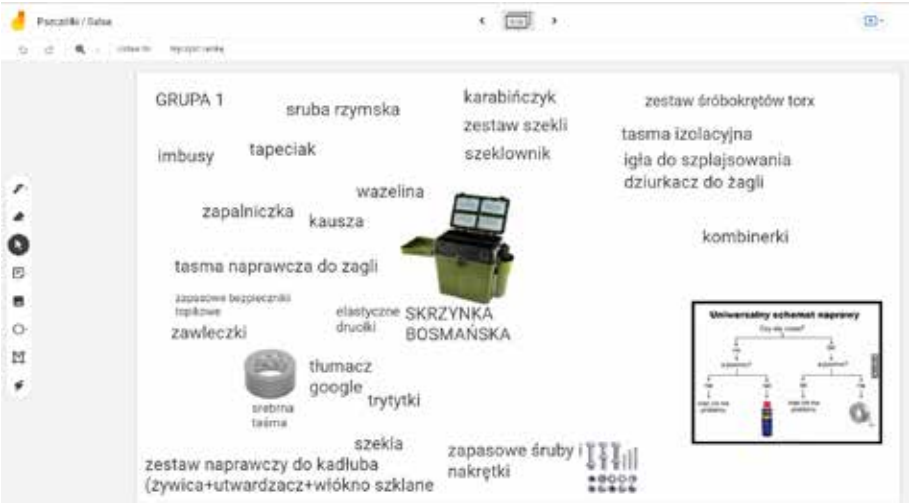
Sample Jamboard illustrating Exercise 2.



The goal of this exercise is to refresh the knowledge about rigging and enrich it with information about the structure and sewing of sails.

Exercise 3. / time: 20 min / aim: to put together a boatswain's toolbox

The participants work split into groups by the instructor. Their task is to find pictures of the tools and devices that every boat should have and explain what they are for. This was they will learn the term "boatswain's toolbox" and how to use it.



Sample Jamboard illustrating Exercise 2.

The goal of this exercise is to teach the participants how to select information and hierarchize its importance. The work requires combining practical skills with knowledge, which stimulates abstract thinking and is an additional benefit of this exercise.

The student learns/gains:

- how other boatbuilding shops and/or other maritime culture institutions work,
- develops the skill to make external contacts,
- improves their communication skills.

Narzędzia:

- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own).

Preparation and planning:

During the class, the project participants work in groups of 10.
The instructor may split them into smaller groups.

The classes take place on-line with a representative of a boatbuilding shop working at The Boat Lab at the Norwegian Maritime Museum. It is worth considering inviting someone from an institution involved with maritime culture, a boatbuilding shop, shipyard or watercraft manufacturer. The selection of the guest should be based on the overall aims of the project and the good of its participants.

Sample institutions:

- Norwegian Maritime Museum (Norway),
- The Maritime Museum of Finland (Finland),
- Kalmar läns museum (Sweden),
- National Maritime Museum in Gdańsk (Poland),
- National Museum in Szczecin (Poland).

The classes may be in person or on-line using any software that enables remote communication. In case of a gust from abroad, it is worth considering employing a simultaneous translator so that everyone can actively take part in the classes. Before the class begins, we can also ask for the participants to turn on their cameras and actively take part in the meeting. Its aim is to introduce the guest's institution and show other experiences related to boatbuilding or maritime culture. Another benefit is the opportunity for the project participants to establish new contacts, and learn to present themselves and their newly acquired skills.

The student learns/gains:

- the importance of teamwork,
- the ability to identify their strengths and weaknesses,
- interpersonal awareness.

Tools:

- Jamboard (or any other tool that provides the means for online group work)
- Zoom (or any other software that is capable of splitting the participants into virtual rooms or smaller groups and allow them to work on their own)
- Mentimeter (or any other tool used to carry out a quiz)

Preparation and planning:

The project participants work in a group of 10.
The instructor may divide them into smaller groups.

Exercise 1. / time: 10 min / aim: integration

Team integration exercises

Exercise 2. / time: 45 min / aim: the role of teamwork

The instructor prepares a Belbin test, which is sent to the participants. After they take it, the instructor assigns the roles given to the participants on Mentimeter and discusses each of them. The next step is to comment on the Belbin test results.

The exercise uses the Belbin test available at www.belbin.pl

The exercise's aim is to teach the participants the importance of teamwork and to make them aware of the role they play in this process.

Gdańsk 2022