

Virus

Session 6

TIME

90 min.
including
break



Art of learning

THEME
15



WARM-UP: MUSICAL DANCE MEDLEY, SONG OF CHOICE, THEN 6 AND 7 (OUTSIDE)

This will happen:	The whole group moves to the music, different movements to the different types of music, ending with the Immune system song.
Materials needed:	Speakers to play music outside and a device to play musical playlist from.
Preparations in advance:	
Preparations in the space:	Connect speakers and devices and check it all works.
The space looks like this:	Outdoors open space.

GUIDANCE:

- The students are scattered throughout the room, with room to move to the music.
 - Put on the playlist, optional song as intro. Let the students move freely to the music, but add an instruction to each song, as suggested below (or choose something else). Then song 6 and 7.
 - Song 6: Coronavirus song:** L'Orchester de Contrebasses - Bass, bass, bass, bass, bass and bass. Pretend to be a spy sneaking around hiding from the enemy. Move silently, fast or slow, constantly on guard. Play with the movements.
 - Song 7: Immune system song:** Prokofiev – *Romeo and Juliet*, Op. 64, Act 1, scene 2: Dance of the Knights. Pretend they're in the military. First let each student experiment on their own. 2nd half: Supervisor gives military (and with humour) instructions to get everyone to line up, stop, say hello, etc.
- If it is not possible to play the music outdoors, the warm-up can take place either by each person imagining the music in their head, or by inventing another warm-up that can prepare the students for being viruses and immune system.

REFLECTION: YES/NO IN THE OUTDOOR SPACE AND HAND-WARMING CLAP

This will happen:	Students make yes/no claims by standing on the line in the outdoor space. Hand-warming clap in circle.
Materials needed:	Cones/chalk or any other means necessary to mark a line across the field.
Preparations in advance:	Prepare possible yes/no statements (not right and wrong answers).
Preparations in the space:	
The space looks like this:	Open space (and classroom space).

GUIDANCE:

- Divide the outdoor space into two parts with cones/chalk.
- Explain: One side is YES, the other side is NO. The adult makes a statement and the students must choose which side they want to stand on depending on what their response to the statement is. Try the principle with a test statement (for example, 'I think apples are the best fruit').
- Next say some statements which reflect the session. Examples :
 - I liked being a virus more than being part of the immune system.
 - If I were part of the immune system, I'd be a macrophage.
 - In the immune system, I think the Dendritic cells have the most important role.
 - Without a vaccine, I think the virus would have won the fight.
- After each claim, select a couple of random students and ask why they chose to answer yes or no.
- Stand in circles and take a quick round of hand-warming claps as a finish. Remember: Don't use this activity to make statements with right and wrong answers, it is just intended for showing different opinions, all of which are valued. End with a quick hand-warming clap in the circle to finish. Thank everyone for their contributions today. Hand-warming clap: Everyone stands in a circle, following the leader. Palms together, rubbing them back and forth to create heat in the hands. Lead the hands up, down, side to side (as they like), and end by separating the hands and after a moment, clap the hands together. If everyone claps at the same time – perfect... if not, try once more. Finish in a good place and thank everyone for today.

NOTES

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WARNINGS

! preparations

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MAIN ACTIVITY: IMMUNE SYSTEM PHYSED GAME – PLAYED OUTSIDE !

This will happen:	Play the immune system PhysEd game. Be introduced to the different parts of the immune system along the way.
Materials needed:	2 or more soft balls, foam noodles/t-shirts or yellow vests. Cones/chalk or any other means necessary to mark the outer boundaries of the playfield. Fabric strips that can be used as tails (1 for each student). Cones or lime or other tools needed to highlight the outer edges and centre of the gaming area.
Preparations in advance:	Read the game rules in detail, and make sure to understand them. Prepare creative introduction of the different Immune system 'characters': Granulocytes, Nose hair, Dendritic cells, Natural killer cells, Macrophages and vaccine (resource bank)
Preparations in the space:	Mark the outer ends, and middle of the field.
The space looks like this:	An outdoor open space (playground / football field or similar) or gymnastic hall.

GUIDANCE:

If possible, do this in an outdoor space. Each level of the game is a game in itself and can be played several times in succession. How many of the levels played can also be adjusted as needed, and according to where the best dynamics and commitment occur. When new 'types' in the immune system are introduced, present them in a relevant creative way that makes students remember them. If it is fun, use more props than described.

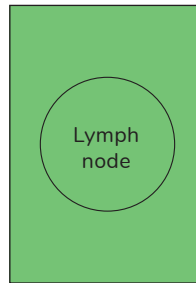
Explain the outdoor playing area, and the goal of the game: that the viruses should fight to get over to the breathing factory to infect the body, and that the Immune system should try to stop the intruders. Each round begins with the immune system (or supervisor) shouting, "Oh no, the body is attacked!" All viruses that are caught become part of the immune system.

Level 1: Granulocytes and nose hair: Present the granulocytes: Important in the immune system because they can remove intruders that enter the body. Select 2 students as granulocytes. They get a soft ball each and sit in the headquarters of the immune system: the Lymph gland. When the round begins with, "Oh no, the body is under attack", all viruses run over towards the breathing factory. The granulocytes can move freely around and throw the ball at viruses. Any viruses hit must sit down on the ground where they are.

Nose hair: Those who are taken by the balls sit on the ground and are now nose hairs. Present nose hair: Nose hair stops viruses from moving forward, like the first line of defence of the immune system. These are given foam noodles/t-shirts/yellow vests, which they can swing around them and try to catch the viruses as they pass by. Any viruses hit by Nose hair do not die, but they have to freeze for three seconds before continuing to run.

Ask after Level 1: Did the immune system manage to look after the body? Was it the immune defences or the viruses that won?

Start for virus
(Outside the body)



Goal for virus:
breathing factory

Level 2: Macrophages: Present the macrophages: Very important in the Immune system. They kill viruses, and they eat them. They both kill and clean up after themselves. Select 2-4 students as macrophages. They can move freely and they bring with them a foam noodle/a t-shirt/vest/tail that they hold in both hands and thus can catch Viruses inside. All viruses that get caught must sit on the ground and are dead.

Ask for level 2: How did their body do? Who won? The immune system or the viruses?

Level 3: Dendritic cells and natural killer cells: Present the dendritic cells: The dendritic cells are important in the immune system, and their job is to reveal/remove the camouflage of the enemies, so that the natural killer cells can recognise them and catch them. Select 2-4 students as dendritic cells. All the viruses now get tails (camouflage), which they attach to their back. The dendritic cells' job is to remove as many tails as possible from the viruses.

Natural killer cells: Present the natural killer cells: The natural killer cells are important in the immune system because they can effectively kill viruses. Select 1-2 students as natural killer cells. These can shout STOP at any time, and anyone without a tail must stop. The killer cells can thus walk slowly and calmly around and take these on the shoulders, and all these viruses die. Those who die will be dendritic cells in the next round.

Ask after Level 3: How did their body do? Who won? The Immune system or the viruses?

Level 4: Vaccine: Present the vaccine: It can strengthen the Immune system and help the defences to cooperate. Select 1-2 people as a vaccine. They can set up a defence consisting of macrophages, dendritic cells, natural killer cells, granulocytes and nose hair (guide helps to select how many and who), placed as they please. The rest of the viruses line up, the vaccine shouts, "The body is under attack. Activate defence!" and the Viruses are try to get over, now with the entire immune system in operation at once.

Perhaps the vaccine recipe needs to be adjusted, and a new formula is tried out before the viruses are eventually stopped (or at least most, so that the body does not get so sick).

NOTES