



Experiment

Students build a model of a bee's eye and find out how insects see by means of an experiment.

Building a model of a bee's eye – instructions

Students work in several groups.

1. Give out 30-40 drinking straws, a roll of adhesive tape and a pair of scissors to each group.
2. The students' task is to join at least 30 straws together to form a large bundle/roll – sticking the straws together carefully using adhesive tape in three places: at the two ends and in the middle.
No straw must stick out!
3. Next each student looks through this bundle (like through binoculars) at a picture about 20 cm away, observing the image that has been formed after joining together these tiny apertures (straws). A bee sees images very similarly – it sees the world in the form of a mosaic composed of many small pictures.

The bundle of straws should look like this:

<https://s-media-cache-ak0.pinimg.com/736x/fa/8c/b1/fa8cb142d1a81076c6af3fd6714611b9.jpg>



Movement game

In the movement game, students find out which dog sees better: a little Yorkshire Terrier or a large Dalmatian?

Movement game: How do dogs see? - Instructions

Ask students which dog they think sees better: a Yorkshire Terrier or a Dalmatian? Encourage them to formulate hypotheses, which they will test in the movement game.

You will need some free space in the classroom. Students squat and try to adopt the pose of a little Yorkshire Terrier. On all fours, very close to the floor, they look at the world from their perspective (they can even, instead of squatting, lie on the floor). They can observe one point – e.g., the view from the window. Next, they assume the position of a dachshund – i.e., they rise up a little bit higher and look at the world from the perspective of a slightly bigger dog. Now how do they see the view outside the window? Finally, they adopt the pose of a large Dalmatian and look at the world from a greater height – from the perspective of a large dog.

It turns out that a Dalmatian sees the most. For a little Yorkshire Terrier or a dachshund, an ordinary field will seem like a giant jungle! The height at which the organ of sight is located significantly affects the area we can see.



Movement game

In the movement game, find out what we gain by having two eyes.

Required materials:

- Scarf/necktie/bandana for covering one eye – one per student
- A light ball (e.g., a volleyball or a beach ball)

1. Take the ball and ask children to sit down in a circle.
2. Each student attaches their blindfold in such a way as to cover only one eye – the right eye (they can do this by pulling the blindfold under their chin and then around the back of their head and tying it). If students don't have a blindfold or are having problems covering just one eye, then they can simply shut one eye. Ask them if they can clearly see the classmate sitting on their right and on their left.
3. Stand in the center of the circle and throw a ball to each student.
4. Students try to catch the ball and throw it back to you.
5. In the second round repeat these actions – but this time the students have both eyes uncovered.