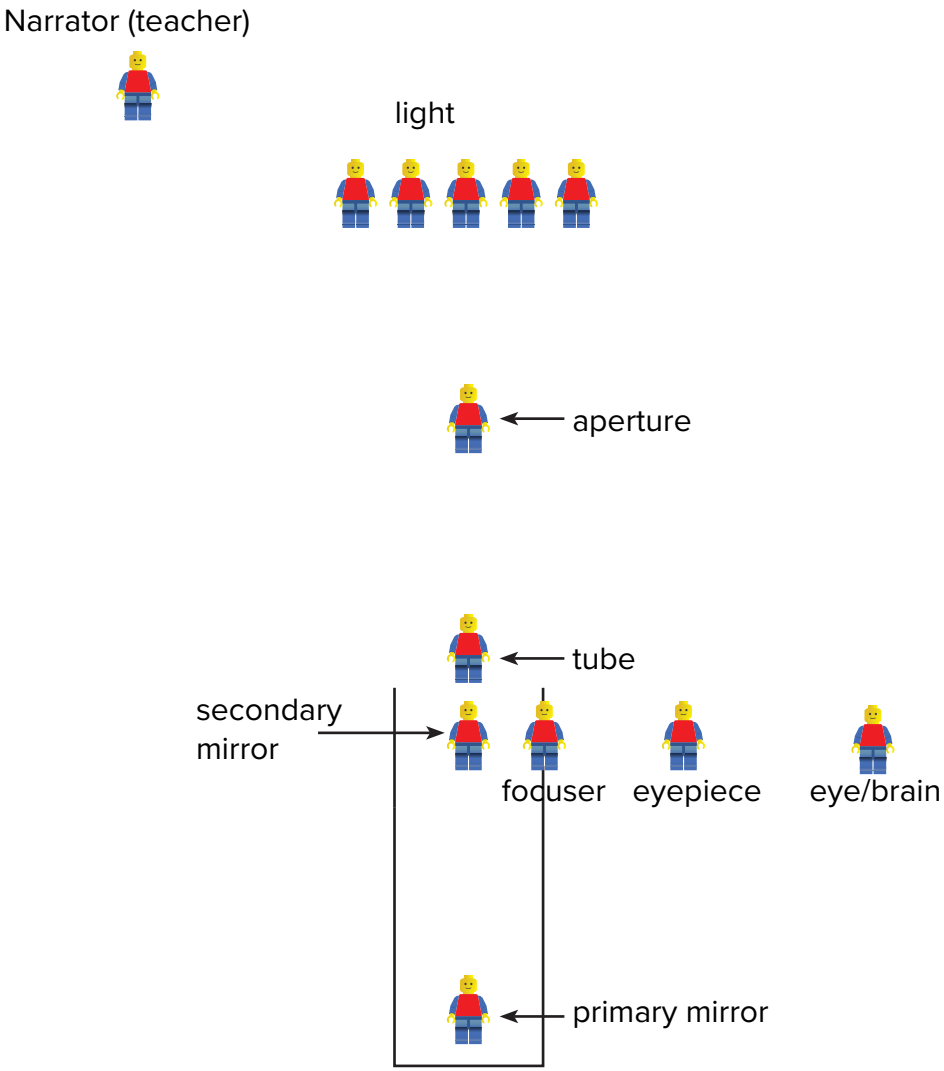
Mirrors and telescopes

ACTIVITY

Model how light travels through a telescope by pretending to be the components.

QUESTIONS - OPTION 1

1. Now that you have completed the exercise, trace out the track that the light particles took in the telescope. Use arrows to show the direction at each step.



QUESTIONS - OPTION 1 cont'd

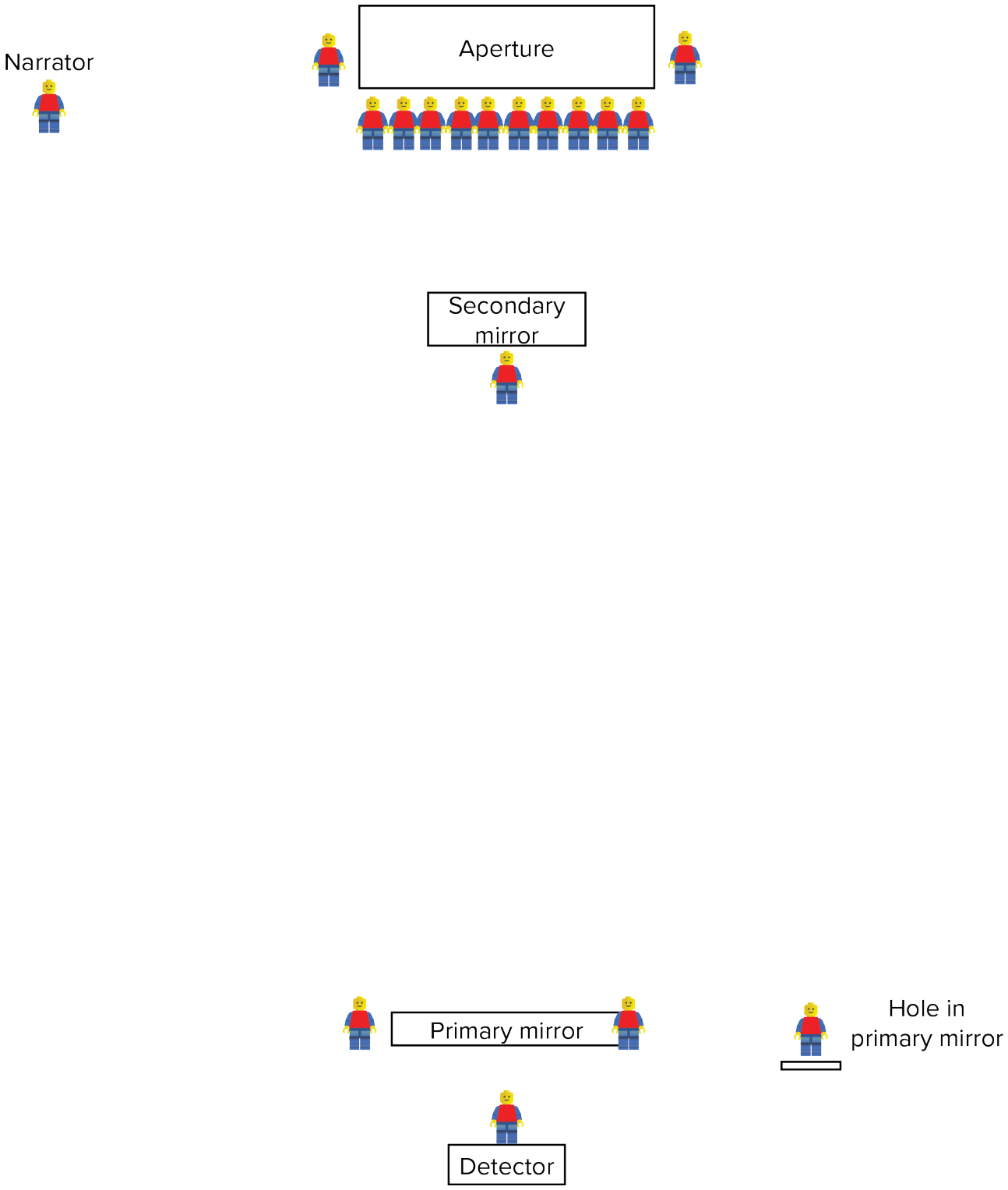
2. In a real telescope, mirrors are curved. What do you think are some advantages of using curved mirrors instead of flat mirrors?

3. Light has the ability to reflect off surface. Keeping this in mind, suggest what material you might use on the inside of the tube to reduce reflections.

4. In this activity you used five people to represent the light. How many 'pieces' of light do you think a real 2 metre telescope could collect?

QUESTIONS - OPTION 2

1. Now that you have completed the exercise, trace out the track that the light particles took in the telescope. Use arrows to show the direction at each step.



QUESTIONS - OPTION 2 cont'd

2. What differences do you notice in the two different layouts of telescopes?

3. Which telescope would collect the most light?

4. The AAT's primary mirror weighs 120 tonnes. Suggest some issues this might cause when operating the telescope.

5. In this activity the 'light' moved from place to place at a person's walking speed. How fast would it be moving in real life?