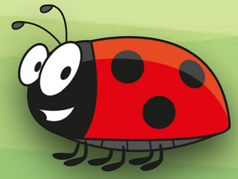


Moving Minibeasts







Today we will be...

learning how to use levers and pivots to create a moving mechanism

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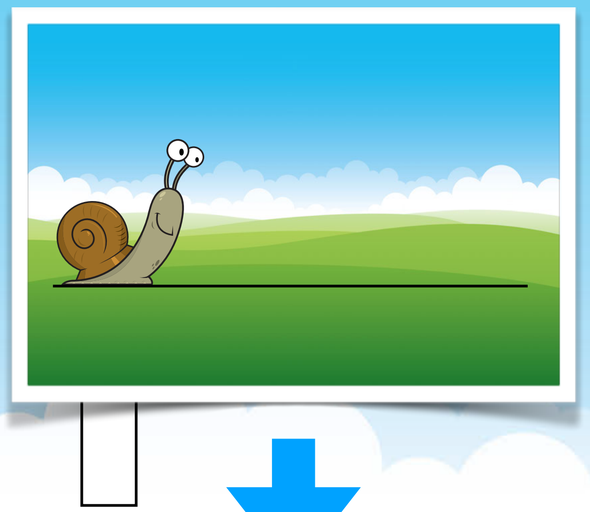
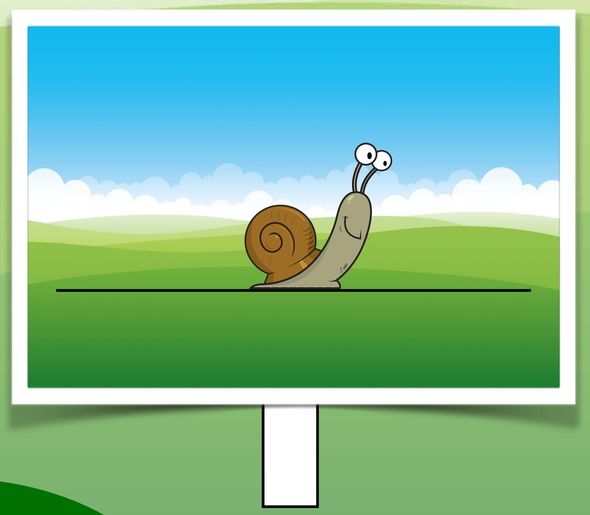
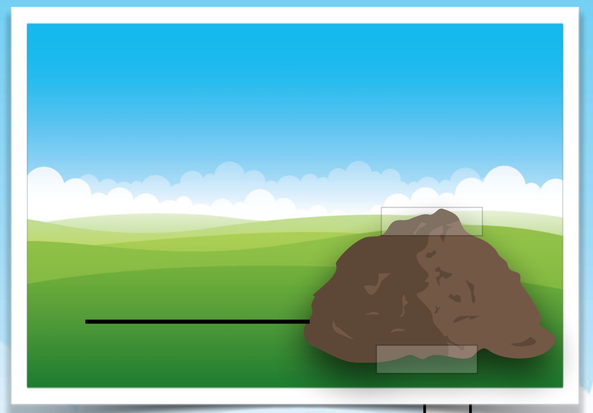
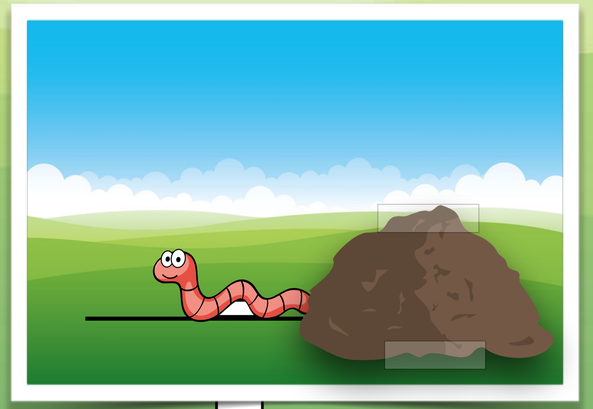
Here are some of the moving pictures we looked at in the last lesson:





Can you remember the name of the **mechanism** which makes these minibeasts move?





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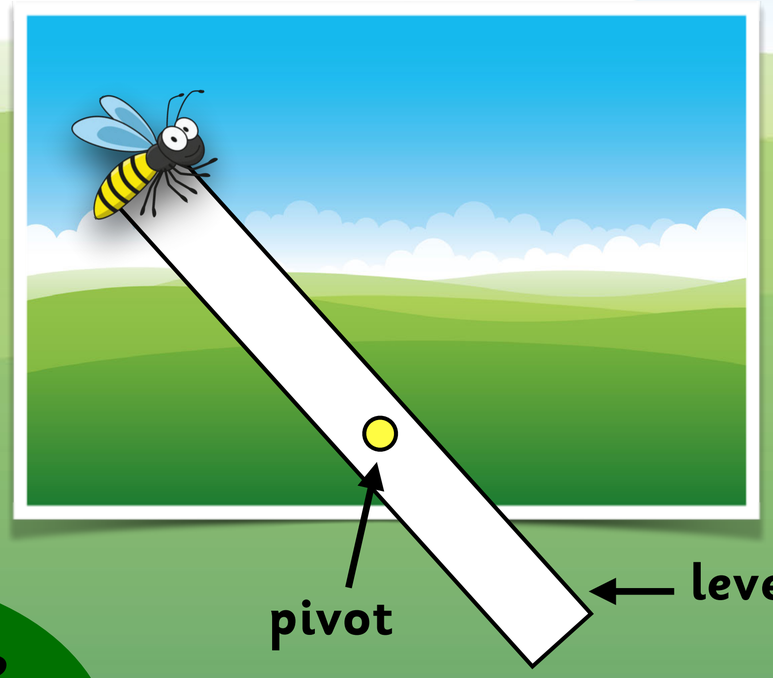
It is a **sliding mechanism**!

Today we are going to look at a <u>different type of mechanism</u> we can use to make a moving picture.



How do you think this moving picture works?

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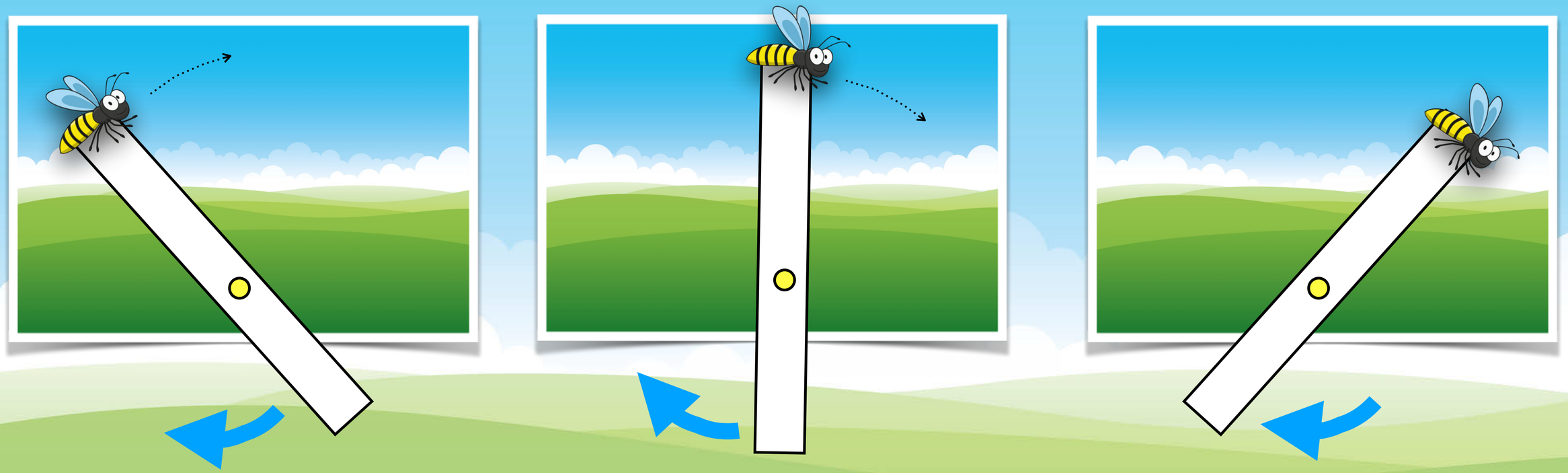
The **pivot** allows the **lever** to move from side to side in an **arc**.



What do you think the **pivot** is?
How does it allow the **lever** to move?

Think, pair, then share your ideas.

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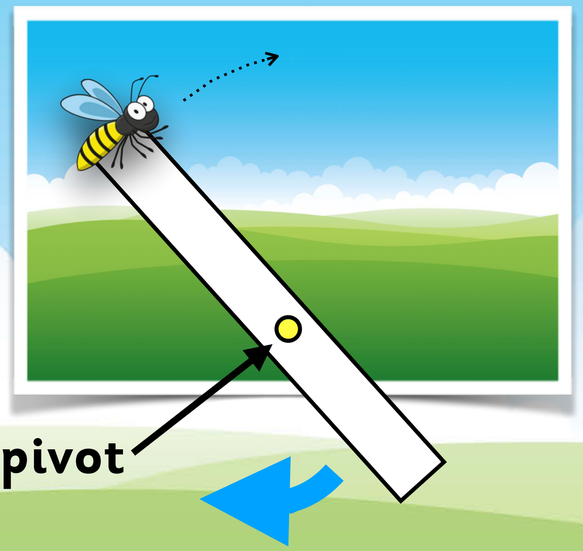
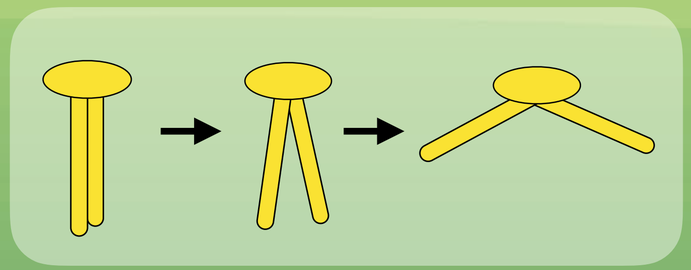
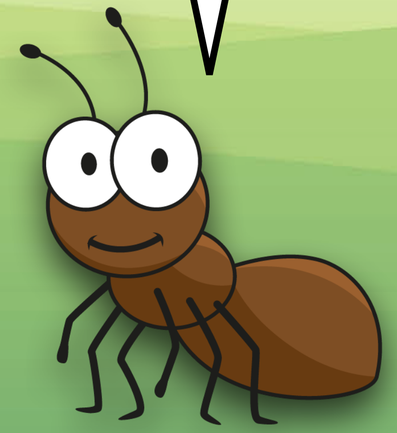
The **pivot** is a ***fixed point***. This means it does not move, but it allows the **lever** that is attached to it to move.



The **pivot** is made by making a hole in the lever and the background scene, and inserting a paper fastener to join them together.

Paper fasteners are also called **split pins** - they have two pins that can flatten out so they can hold two or more pieces of paper or card together.





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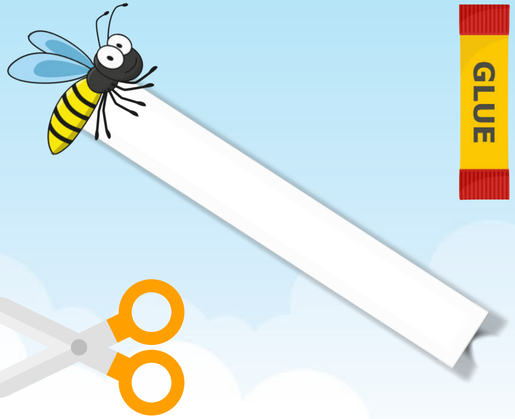
Let's look at how to construct this moving picture, step-by-step:



The **lever** is made from a strip of card, and the moving minibeast is attached to it.

To safely make a hole in the lever, place a small ball of sticky tack underneath and push a sharp pencil through the lever and into the sticky tack.

TOP TIP! Always make a long lever to begin with - you can cut it to make it shorter if you need to.

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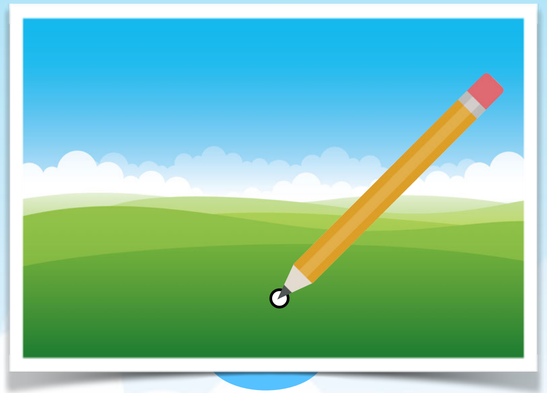
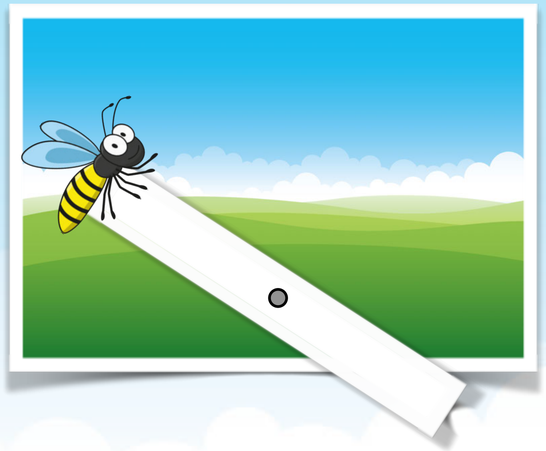


Make the hole in the background scene in the same way.



Carefully line up the hole in the background scene with the hole in the lever.

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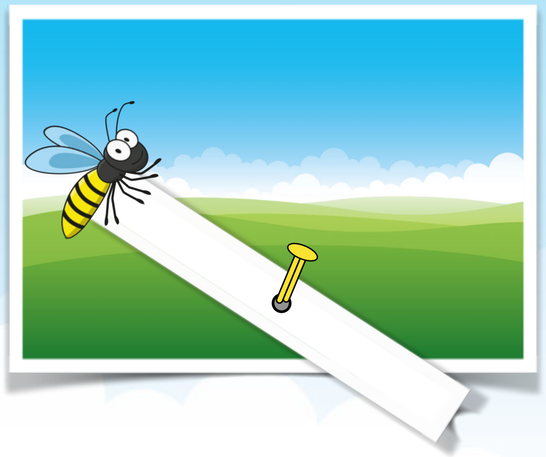
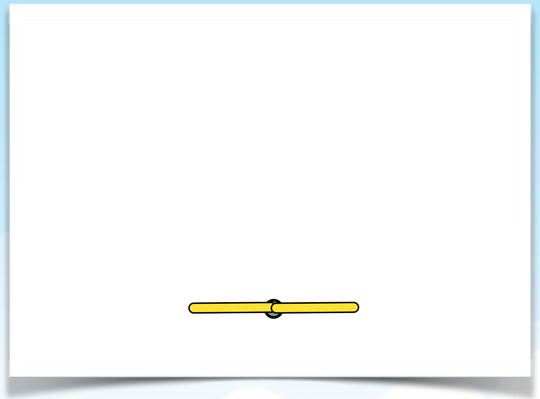


From the front, push the paper fastener through both holes.



Turn the background scene over, and push the two pins of the paper fastener apart and down so that they are flat on the card.

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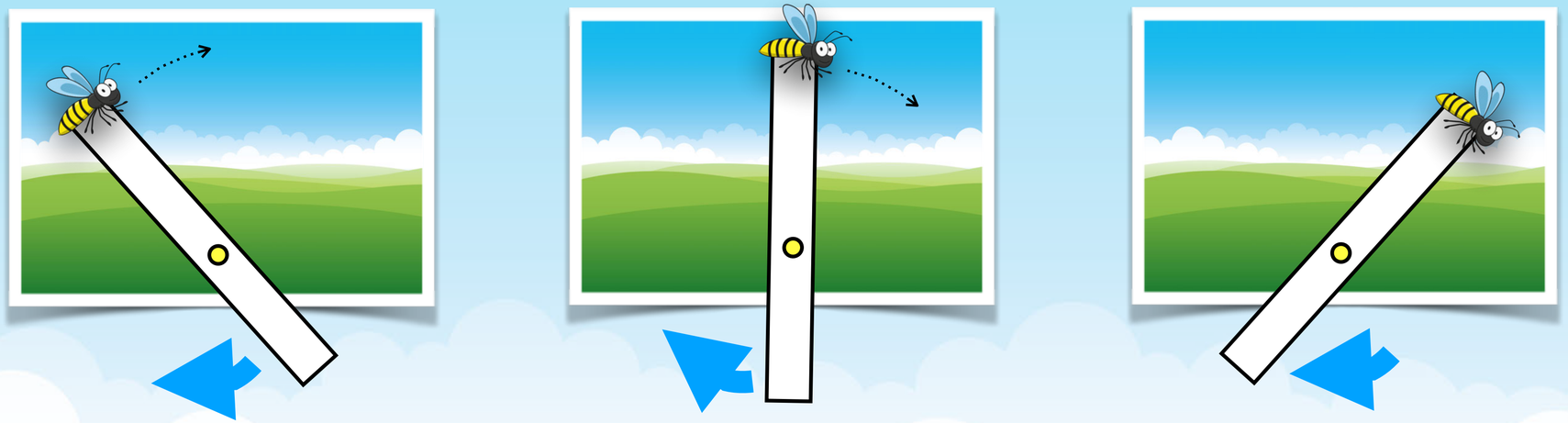
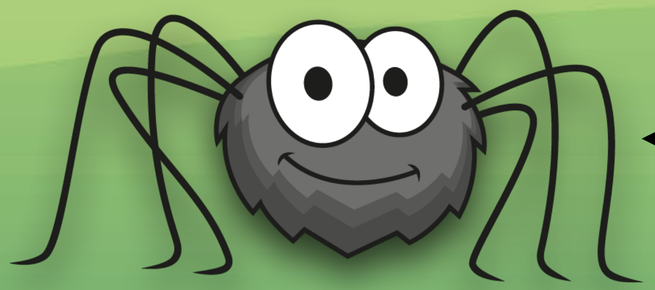


Now you should be able to move the lever from side to side to make the wasp fly through the sky!



The **fixed point** can be made anywhere on the background scene and the lever, depending on the moving picture you want to create.

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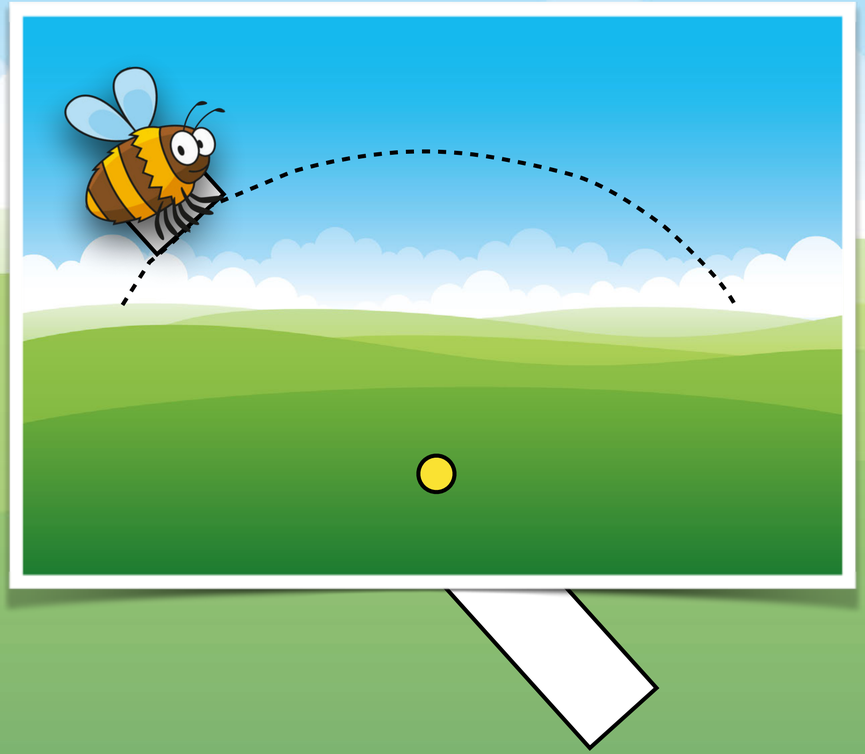
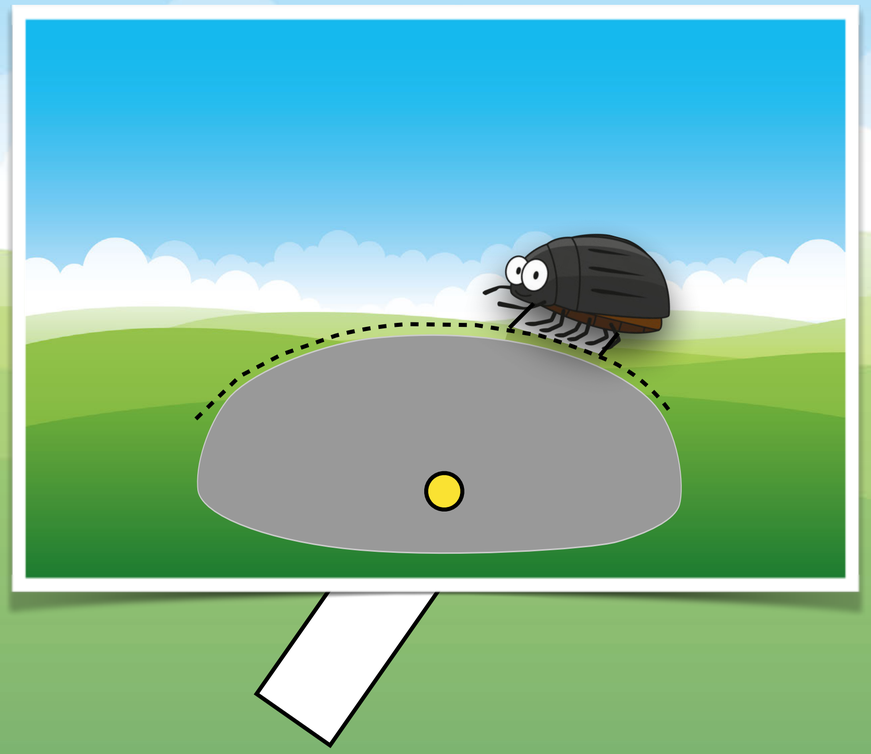
In these two moving pictures, the levers have been hidden at the back of the picture.

Can you explain how this has been done?





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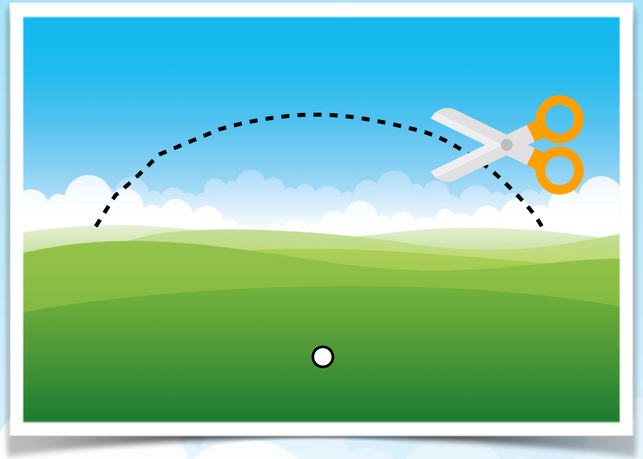
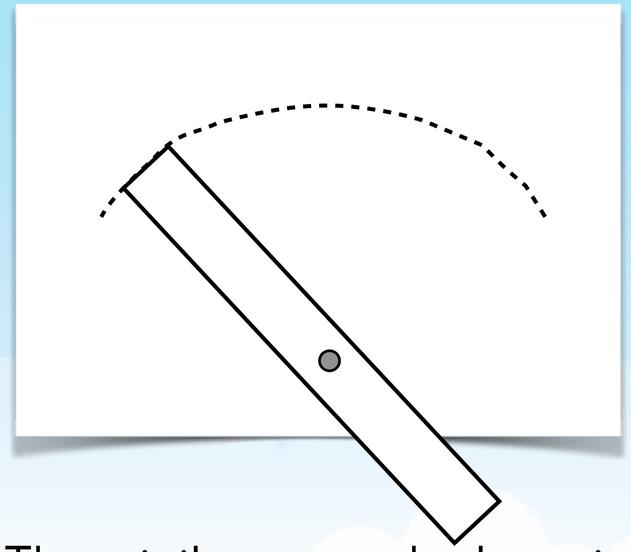
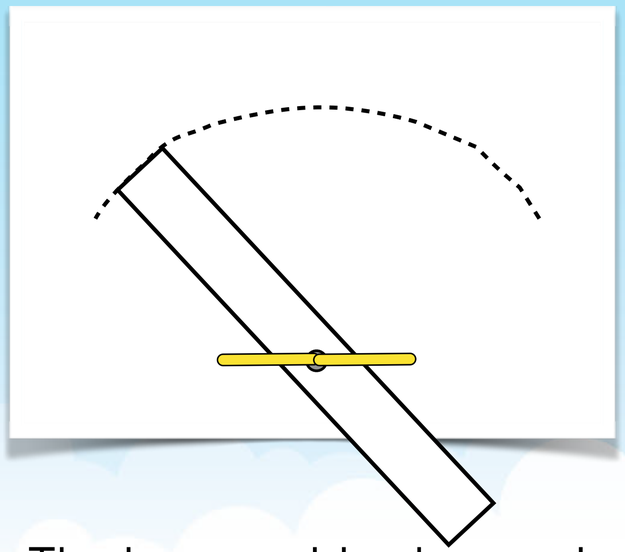


A slot in the shape of an arc is cut along the path that the minibeast will move.

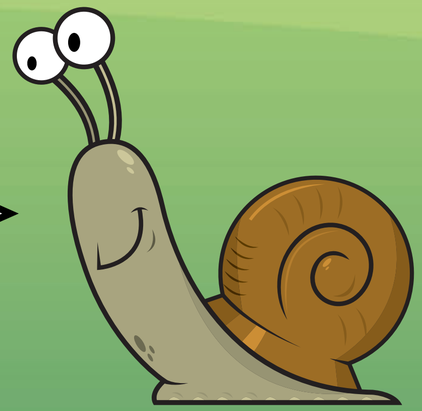


The minibeast on the lever is then pushed through the back of the slot so that it appears on the front of the picture.



The lever and background scene are attached together with a paper fastener at the back of the picture.

Do you think the moving pictures look better when the lever is hidden? Why?



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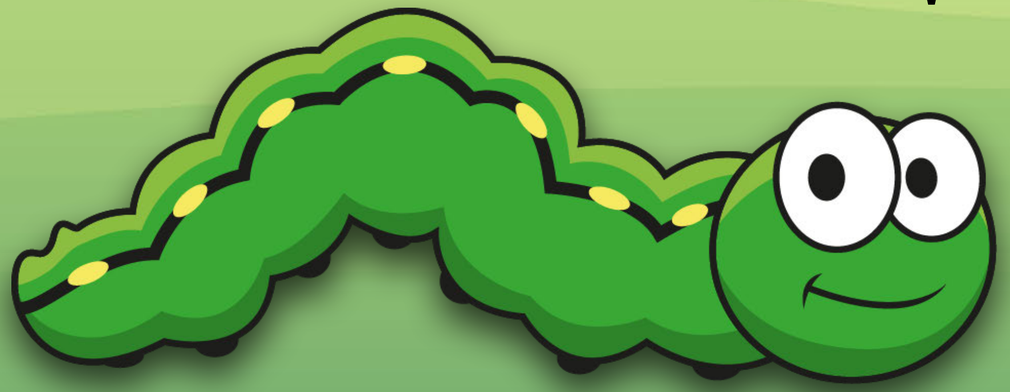
Now it is your turn to use the **lever** and **pivot** mechanism to make a moving picture!



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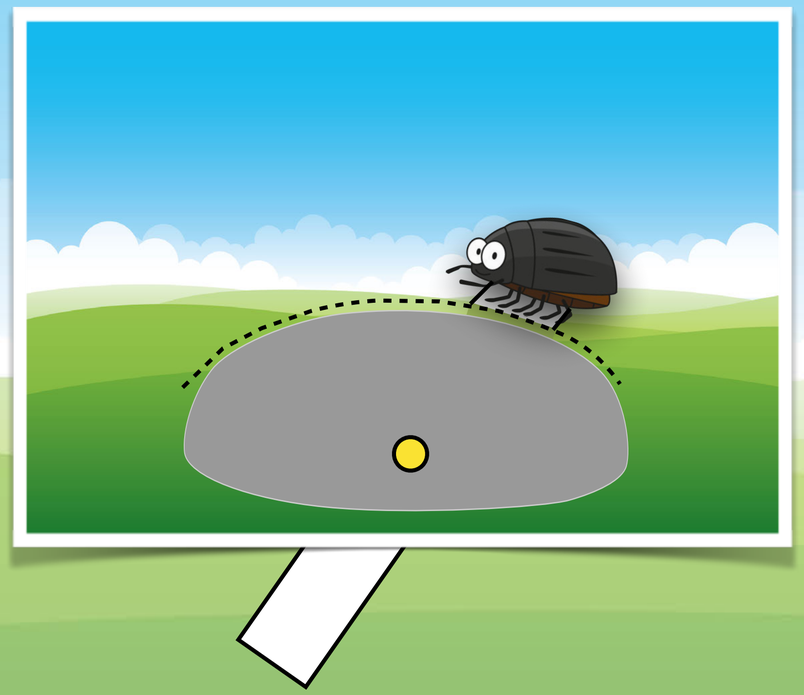
Plenary:

With a partner, explain how this moving picture has been constructed. Try to use all of the words below in your explanation.



lever

attach

pivot

paper fastener

fixed point

slot

arc

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