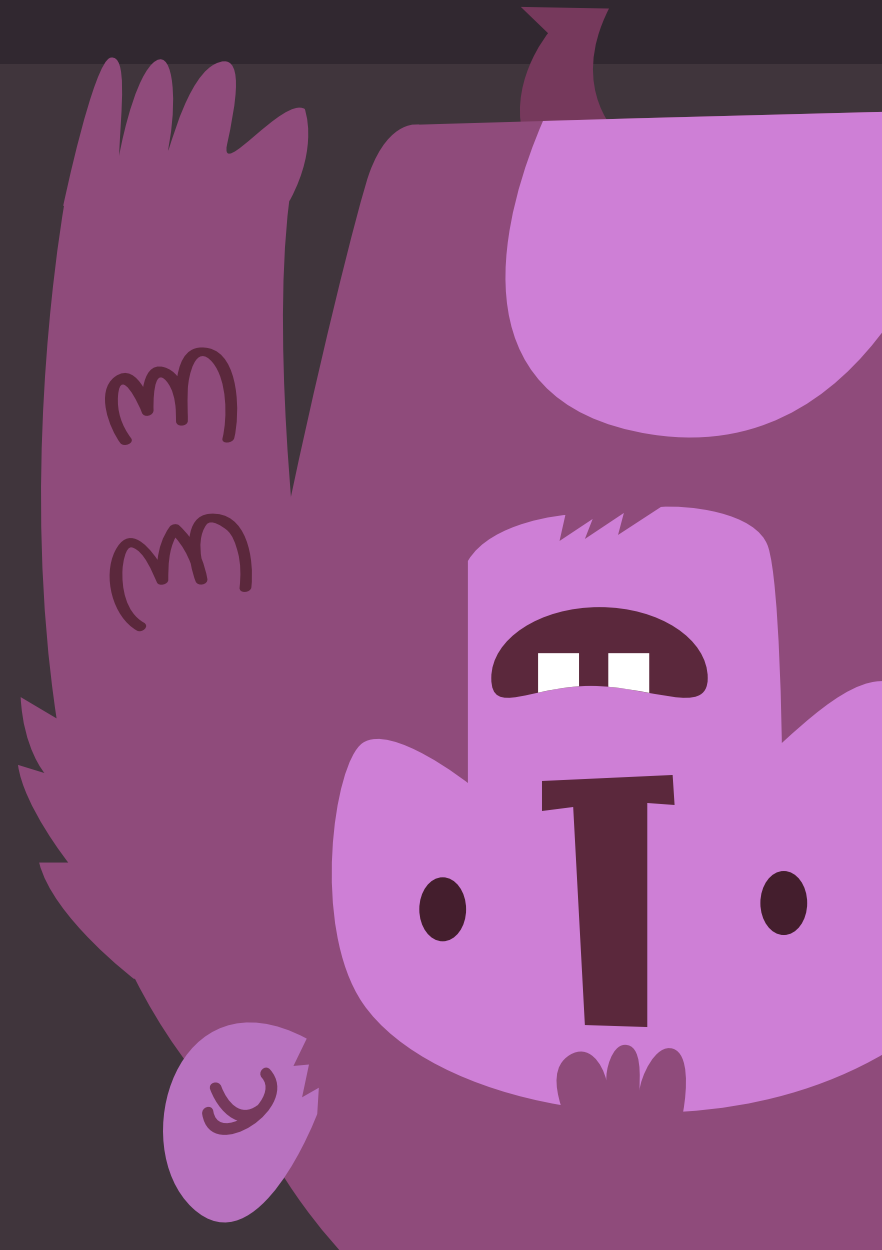


HOPSCOTCH

LESSON FOUR

Totally Random!



Randomness is really
important in science
and nature.

Take the Peppered moth for example:

Most Peppered moths used to be light colored.



This was a good thing,
because all the trees
they lived near were a
similar color.

It made them very hard
to spot, and therefore
hard to eat!



But then humans came along and polluted the area, and covered the trees in black soot.

Can you guess what happened?

The darker moths hid better, and the lighter ones got eaten.

This helped the darker ones survive and breed more darker moths!



This is called **natural selection**.

No one told the moths to turn darker,
it happened because of a totally
random gene a few of them got!

This robot vacuum, called the Roomba, also uses randomness to clean a house.

It moves randomly, bumps into walls, and then turns randomly, until the user says the room is clean and turns it off!



This company used random-ness to make every bottle they produce unique!

