

## 3. Things That Go

### Activity Structure – 45min

Activity	Timing
Warm up Game	5 mins
Introduce Story and Project	10 mins
Main Activity	25 mins
Final test & debug	Throughout
Share with group	5 mins

#### Overview

Create a fun scene with different transport characters, moving about the screen and triggering other characters to move and make sound using the Start on Bump Block. Children will also be introduced to counting loops using the repeat block.

Optional Books as stimulus: “You Can’t Take an Elephant On The Bus” By Patricia Cleveland-Peck

#### Learning Objectives

- To confidently use motion blocks
- To use Start on Bump
- To use a counting loop

#### National Curriculum / EYFS Curriculum Links

##### Communication and language: listening and attention

- Two-channelled attention – can listen and do for short span.

##### Mathematics: Numbers

- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.

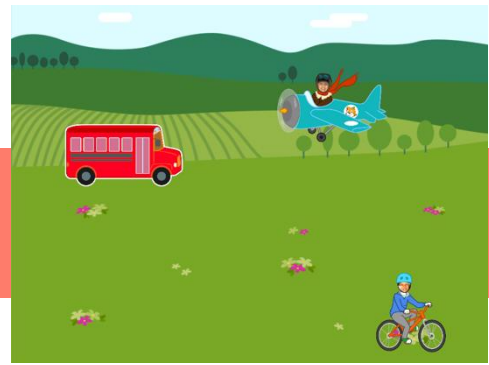
#### Warm up game: Start on bump

1. Show the ‘start on bump’ card. *What do you think would happen if I used this card?* Explain that we’re going to play a game where the children are going to trigger each other to ‘start on bump’.
2. Ask the children to stand in a line. *Can you each think of a way you could move from this side of the room to the other side? Hopping, skipping, jumping, etc?*
3. The first child in the line ‘Starts on green flag’. They move to the opposite side of the room then return.
4. On returning they high-five the next person in the line. Both children now move from one side of the room and back again (hopefully using a different movement).
5. Continue with each child ‘triggering’ the child behind them in the line until all the children are moving back and forth (using different movements).

#### Introduction (discuss the project together, share ideas and create excitement)

- Discuss different modes of transport and how we travel around. Discuss how some modes of transport are better suited for certain situations than others. *How did you travel here today? What transport would you use to go on holiday? Would you take an airplane to school? Would you ride your bike to France?*
- OR Read a suggested transport story. *How many different forms of transport were there in this story?*
- Show the children the project. *Which start block did I use for the bus? When did the bike start moving? How did I control the order in which my characters started moving?* Explain that you had to think carefully about each character’s movements and who they would bump into first.
- Show the children the code and explain that the characters repeat a sequence of movements because I have used a repeat block, this is known as a **counting loop**. Demonstrate how the repeat block works.

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## Main Activity

Key questions and teaching

1. Choose your background from the library.
2. Select, edit or draw three transport characters. Support the children to add their face to their character.
3. Record the appropriate sound for each transport character. Encourage children to create a short and clear sound. When the characters bump into each other we want them to make their transport noise. *What trigger block will you use? [Start on bump, Record 1] Will you repeat your sound? How will you do this? Will you use a wait block?*
4. *Which character will move first? Which start block will you use for them? Who will they bump into first? How will they get there?* Help the children to make the first character move in an interesting way towards the second character then bump them. *Will you use a Repeat block? How many times will you repeat your movement? At the end of your characters movement would you like them to return to their starting positions? What happens if you put the go home block at the end of your line of code?*
5. Repeat 4 for the remaining two transport characters. Encourage the children to have a clear design for the order in which the characters bump into one each other.
6. Test and Debug. Do your character's move in interesting and different ways? Have you recorded a clear and short sound? Do all the characters start moving? If not, What will you change? Have you used the repeat block to create a counting loop?

## Teaching points

- For progression, children could copy-code the first character, code the second character with support, and be encouraged to code the third and fourth characters independently.
- Make sure the children know how to use the 'Go home' button to reset their character's positions.
- Encourage the children to test and debug throughout.
- Support children to use the repeat block.

## Possible Extensions

- Children can draw their own transport character's
- Make a character's animation more sophisticated for example; A rocket shoots into space and using screen switch performs an exciting movement in a new screen and then switches back to scene 1.
- Use several repeat blocks within the same line of code.

## To Simplify

- Use fewer characters.
- Code the characters to move and play a sound in sequence rather than concurrently. *Can you add more than one sound block into your sequence of code?*

## Finishing up

- Children show their projects to each other. *Did you use a repeat block today? What did you find easy/ hard about using it? Did you have to test and debug to get the correct number of counting loops for the character?* – Praise children for testing, debugging and tinkering.