📘 **FOR PARENTS/CARERS**

🏎️ Fast & Curious: Speed & Movement

A single lesson, cross-curriculum Curiosity Pack for Year 3

📌 At a Glance

Topic: Speed and Movement

Age Level: Year 3

Session Length: 45–60 minutes

Wonder Seekers will:

- explore how objects move
- investigate pushes and pulls
- test ramps, surfaces, and movement
- observe and compare results
- record discoveries in different ways
- create a racing idea inspired by their investigation

🌍 Lesson Overview

This Curiosity Pack introduces Wonder Seekers to the ways scientists and engineers observe, test, and understand movement. Learners investigate how pushes and pulls affect the way objects move while exploring ideas such as speed, ramps, surfaces, and distance travelled.

The lesson combines science, observation, creativity, and inquiry learning through hands-on investigation and flexible creative tasks.

This learning experience supports:

- observation and questioning
- comparing and testing ideas
- recording and organising information
- scientific thinking and investigation
- problem-solving and design thinking
- creative communication
- explaining ideas in different ways

The lesson is designed using inclusive learning principles, supporting diverse learning needs through:

- self-paced learning
- visual supports
- flexible activity choices
- movement and hands-on exploration

- multiple ways to show learning
- opportunities for discussion, drawing, building, writing, and creating

⏱️ Session Length

Total learning time: 45–60 minutes

Wonder Seekers may:

✓ complete the lesson in one session

✓ pause and return later

✓ spend longer on favourite activities

✓ simplify or extend the task

🎯 Learning Focus

This Curiosity Pack explores:

- movement and speed
- pushes and pulls (forces)
- ramps, surfaces, and rolling objects
- observation and scientific investigation
- simple engineering and design thinking

Learners will:

✓ investigate how different objects move

✓ notice and compare the effects of pushes and pulls

✓ observe how ramps and surfaces change movement

✓ organise ideas visually

✓ communicate discoveries through drawing, building, writing, or discussion

✓ create a racing design, model, or project inspired by their investigation

⭐ Success Looks Like

Success may look different for each Wonder Seeker.

Examples may include:

✓ identifying how pushes and pulls affect movement

✓ comparing how different objects move

✓ noticing how ramps or surfaces change movement

✓ explaining what happened during an investigation

✓ creating a labelled diagram, chart, or results table

✓ building a model or testing setup

✓ designing a race car, racing idea, or movement project

✓ sharing discoveries in a way that works for them

Exploring, noticing, testing, and creating are all part of success.

🧰 Materials

You may want:

- paper or workbook
- pencils and coloured pencils
- a toy car, model vehicle, or another rolling object
- books, pictures, or websites about Formula 1 cars or racing
- scissors
- glue or tape
- cardboard or craft paper
- books or blocks to create a ramp

Optional:

- building materials (blocks, LEGO, or similar)
- modelling materials (clay, playdough, or similar)
- recycled materials
- craft materials (foil, stickers, coloured paper, or similar)
- tablet/computer
- printer
- ruler or measuring tape
- stopwatch or timer
- different surfaces for testing (cardboard, carpet, tiles, fabric, or similar)
- additional toy cars or rolling objects for comparison

🔗 Suggested Learning Resources

🏎️ Formula 1 – Photos and Videos

https://www.formula1.com

Photographs, videos, and information about Formula 1 cars, teams, tracks, and races.

🏁 National Geographic Kids

https://kids.nationalgeographic.com

Articles, photographs, and videos that explore science, technology, engineering, and how things work.

🔒 Online Safety Reminder

When exploring online, remember:

👩‍🏫 Ask an adult first

🌐 Use trusted learning websites

🔐 Keep personal information private

⚠️ Tell an adult if something feels wrong

Stay curious and stay safe.

🚙 DK Find Out – Cars and Transport

https://www.dkfindout.com

Pictures and simple explanations about vehicles, engineering, transport, and technology.

🌍 **Britannica Kids**

https://kids.britannica.com

Age-appropriate information about motion, forces, transport, engineering, and inventions.

🎥 **SciShow Kids**

https://www.youtube.com/@SciShowKids

Short videos introducing science concepts such as movement, forces, pushes, pulls, and investigation skills.

🏎️ **LEGO Racing Car Inspiration**

https://www.lego.com

Pictures and building ideas that may inspire race car designs, models, and engineering creations.

🎥 **F1 Car Videos**
Search: **"F1 car explained for kids"**
Short videos showing:

- parts of an F1 car
- how racing cars move
- race tracks and racing teams
- engineering and design ideas

📷 **F1 Car Image Search**
Search: **"Formula 1 car photos"**
Looking closely at pictures can help Wonder Seekers notice:

- tyres
- wings
- cockpit design
- colours and sponsorship
- shapes that help cars move quickly

🧠 Universal Design for Learning Supports

This Curiosity Pack supports different ways of learning by providing flexible choices for engagement, learning, and expression.

Multiple ways to engage

Learners can:

- choose which object, vehicle, or ramp to investigate
- work independently or with support
- explore activities in different ways
- take movement, sensory, or regulation breaks
- spend more time on favourite parts of the lesson
- use real objects, toys, or models during learning

Multiple ways to learn

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📘 FOR LEARNERS

🏎️Fast & Curious: Speed & Movement

🧭 Wonder Guide

Welcome Wonder Seeker!

Wonder Seekers sometimes notice that some things move faster than others.

A Formula 1 car is one of the fastest racing cars in the world. These cars are designed to move quickly around tracks while helping drivers stay safe.

Racing cars look different from everyday cars. They have large tyres, special wings, and shapes that help them move in different ways.

People who design racing cars spend a lot of time testing ideas, solving problems, and improving their designs.

In this Curiosity Pack, Wonder Seekers explore how racing cars move, how different things affect movement, and how racing cars are designed.

Looking closely at movement can help Wonder Seekers notice patterns, ask questions, and discover new ideas.

The activities guide Wonder Seekers through different parts of the journey. Ideas are explored by observing racing cars, comparing movement, testing ideas, and creating something inspired by these discoveries.

Ideas may be shown in many ways:

- 🖍️ drawing
- 📝 writing short notes
- 📊 creating charts or tables
- 🧱 building a model
- ✂️ making or crafting
- 💻 creating digitally
- 🗣️ explaining ideas aloud

Activities may be completed in order or Wonder Seekers may begin with the part that feels most interesting. Taking breaks, testing ideas, noticing changes, and making discoveries are all part of the Wonder Journey.

🔎 Wonder Investigation

Wonder Seekers sometimes notice that objects move in different ways.

Some objects move quickly.

Some move slowly.

Some roll smoothly.

Some stop quickly.

Scientists use the word **force** to describe a push or a pull. Pushes and pulls can make objects start moving, stop moving, speed up, slow down, or change direction.

Looking closely at movement can help Wonder Seekers understand how pushes and pulls affect the way objects move.

👀 Wonder Seekers sometimes explore movement by rolling, pushing, testing, and comparing different objects.

Some Wonder Seekers notice:

- which object travels furthest
- which object moves fastest
- which object stops quickly
- how movement changes when the push changes
- how movement changes on different surfaces

Objects to explore may include:

🏎️ toy cars

🚗 model vehicles

⚽ rolling objects

📦 small boxes

🧱 building creations

or another object that can move.

Looking closely at these changes can help Wonder Seekers understand how movement works.

🧪 Speed & Movement Investigation

Scientists and engineers often test ideas to learn how movement works. By changing one thing at a time and observing what happens, they can discover patterns and solve problems.

Wonder Seekers may create a simple testing space using a toy car, rolling object, or another object that can move.

In this investigation, Wonder Seekers may explore how different things can change the way an object moves.

Wonder Seekers may choose one object to test.

Then change **one thing at a time** and observe what happens.

You might investigate:

- a gentle push and a stronger push
- a low ramp and a higher ramp
- different surfaces such as carpet, cardboard, or tiles
- two objects that are different sizes or weights

🔍 As Wonder Seekers explore, they may notice:

- which object travels furthest
- which object moves fastest
- which surface slows movement
- how ramp height changes movement
- how a stronger push changes movement
- how different objects move in different ways

❓ Wonder may ask themselves question as they explore:

- Which object travelled furthest?
- What happened when the ramp became higher?
- Which surface slowed movement most?
- What happened when the push changed?
- What would you like to test next?

🖍️ Ideas and discoveries may be recorded by:

- drawing what happened
- labelling observations
- writing short notes
- making a simple chart
- creating a results table
- comparing test results

Looking closely at these changes can help Wonder Seekers understand how pushes and pulls affect movement.

🎨 Wonder Studio:

Wonder Seekers now bring ideas together.

Engineers often use what they learn from testing to improve designs and create new ideas.

In this activity, Wonder Seekers create something that shares what they discovered about speed, movement, or racing.

You may create:

🏎️ a race car design

🎨 a poster

📄 a fact page

📊 a results chart

🧱 a model

✂️ a crafted display

💻 a digital creation

Wonder Seekers may think about:

- What helps a car move quickly?
- What helps a car stay balanced?
- What did you discover during your investigation?
- What features would your racing car include?

You may keep your creation simple or add lots of detail.

Some Wonder Seekers may include:

- labels
- diagrams
- movement results
- car features
- charts or data
- something interesting you discovered

There is no single correct way to create. Different Wonder Seekers may choose different ways to share their discoveries.

💭 Reflection

How did this Curiosity Pack feel?

😀 Loved it

😳 Interesting

😐 Okay

😟 Challenging

Wonder Seekers may think about:

- Which investigation was most interesting?
- What affected movement the most?
- What surprised you?
- What would you like to explore next?

You may reflect by:

- talking
- drawing
- writing

- building
- recording a short explanation