2024 PARENTS' BRIEFING
Primary 4

CURRICULUM AND ASSESSMENT
SCIENCE

Content

A. Themes and Topics

B. Assessment

C. Strategies to Support our Pupils

Focus of Theme

Thematic Approach (scientific ideas)

Systems

- A system is made of different parts. Each part has its own unique function.
- Different parts of a system influence and work together to perform function(s).

Cycles

- There are repeated patterns of change around us
- Observing cycles helps us to make predictions and understand things around us

Energy

- Energy is required to enable things to work or move.

Syllabus Organisation

Levels	P3	P4	P5	P6
Themes	Diversity . Cycles . Systems . Interactions . Energy			
Topics	• Diversity of living and non-living things (General characteristics and classification) • Diversity of materials • Cycles in Plants and Animals (Life cycles) • Interactions of forces (Magnets)	• Plant System (Plant parts and functions) • Human System (Digestive system) • Cycles in matter and water (Matter) • Energy forms and uses (Light) • Energy forms and uses (Heat)	• Cycles in matter & water (Water) • Cycles in plants & animals (Reproduction) • Human System (Respiratory and circulatory systems) • Electrical Systems	• Energy forms and uses (Photosynthesis) • Energy conversion • Interaction of Forces (Frictional force, gravitational force, elastic spring force • Interactions within the environment

The Primary Science Curriculum Framework

From 2023 Primary Science Syllabus

Practices of Science

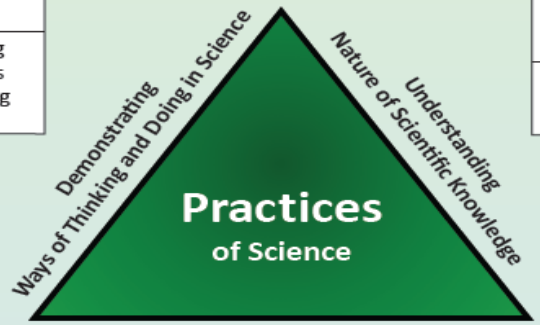
The Practices consist of three components:

a. Demonstrating Ways of Thinking and Doing in Science (WOTD);
b. Understanding the Nature of Scientific Knowledge (NOS); and
c. Relating Science, Technology, Society and Environment (STSE).

They represent the set of established procedures and processes associated with scientific inquiry, what scientific knowledge is and how it is generated and established, and how Science is applied in society respectively.

Demonstrating WOTD		
Investigating ⇄	Evaluating and Reasoning ⇄	Developing Explanations and Solutions
Posing questions and defining problems	Communicating, evaluating and defending ideas with evidence	Using and developing models
Designing investigations	Making informed decisions and taking responsible actions	Constructing explanations and designing solutions
Conducting experiments and testing solutions		
Analysing and interpreting data		

Understanding NOS
Science is an evidence-based, model-building enterprise to understand the real world.
Science assumes natural causes, order and consistency in natural systems.
Scientific knowledge is generated through established procedures and critical debate.
Scientific knowledge is reliable, durable, open to change in light of new evidence.



Relating Science-Technology-Society-Environment

Relating STSE
There are risks and benefits associated with the applications of Science in society.
Applications of Science often have ethical, social, economic and environmental implications.
Application of new scientific discoveries often drive technological advancement while advances in technology enable scientists to make new or deeper inquiry.

Assessment

Purpose?

- Understanding of core concepts
- Readiness of child
- Close learning gap

How?

Weighted Assessments

WA1: Pen and Paper

Booklet A: MCQ
Booklet B: Open-ended / & *Structured Question*

WA2: Performance Task

Application of Skills
Show understanding of Science concepts learnt

End of Year Assessment

Booklet A: MCQ
Booklet B: Open-ended / &
Structured Question

Science Assessment

Modes of Assessment (Primary 4)

Other Forms of Formative Assessment

- Quizzes
- Worksheets
- SLS activities
- Leverages on ICT platforms (Kahoots, Mentimeter etc)

Assess mastery of learning

To identify learning gaps

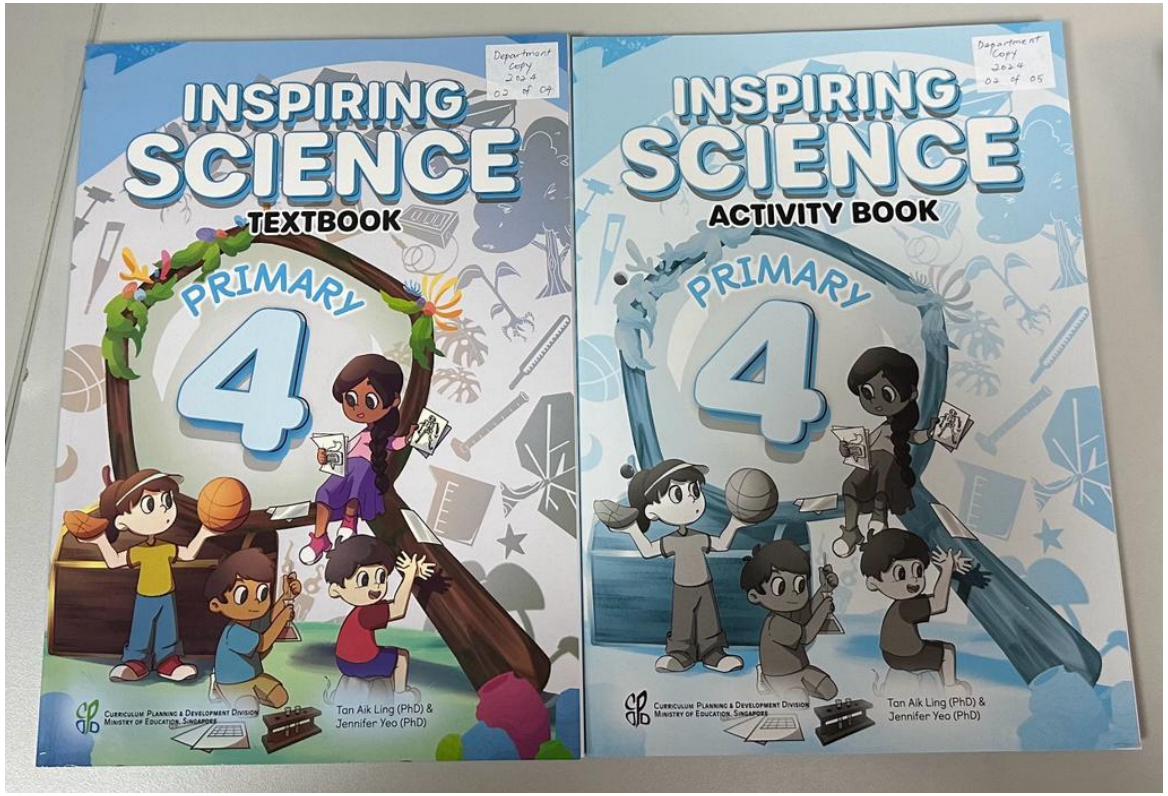
End of Year Examination

- Booklet A - MCQ
- Booklet B - Open-ended

Assess understanding of core concepts

Application of skills

Presentation of Learning Materials

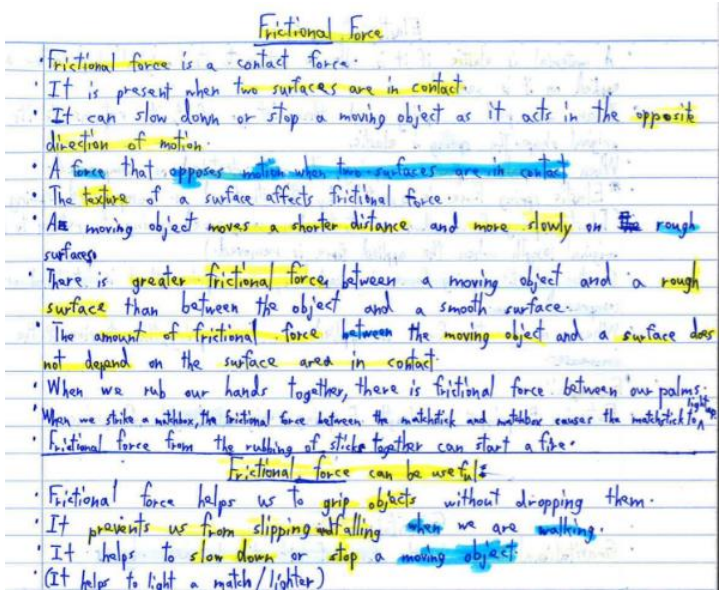


Science Journal
Science-Know-It-All (SKIA)
Process Skill Package
Topical Worksheets

Textbook and Activity Book

Please Note:

To keep all the Science materials until child sits for PSLE



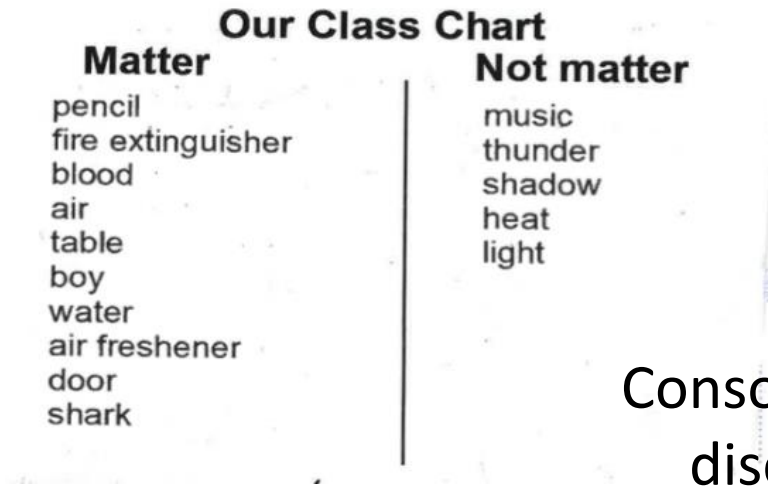
Frictional Force

- Frictional force is a contact force.
- It is present when two surfaces are in contact.
- It can slow down or stop a moving object as it acts in the opposite direction of motion.
- A force that opposes motion when two surfaces are in contact
- The texture of a surface affects frictional force.
- A moving object moves a shorter distance and more slowly on rough surfaces
- There is greater frictional force between a moving object and a rough surface than between the object and a smooth surface.
- The amount of frictional force between the moving object and a surface does not depend on the surface area in contact
- When we rub our hands together, there is frictional force between our palms.
- When we strike a matchbox, the frictional force between the matchstick and matchbox causes the matchstick to light up
- Frictional force from the rubbing of sticks together can start a fire.

Frictional force can be useful

- Frictional force helps us to grip objects without dropping them.
- It prevents us from slipping and falling when we are walking.
- It helps to slow down or stop a moving object
- (It helps to light a match/lighter)

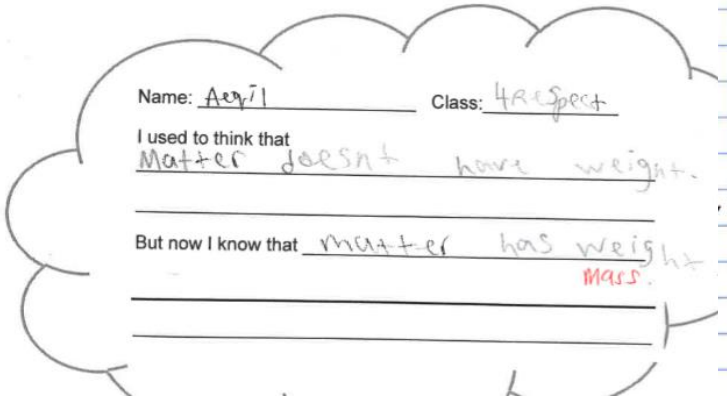
notes taking



Our Class Chart

Matter	Not matter
pencil	music
fire extinguisher	thunder
blood	shadow
air	heat
table	light
boy	
water	
air freshener	
door	
shark	

Consolidated post-lesson discussion print-out

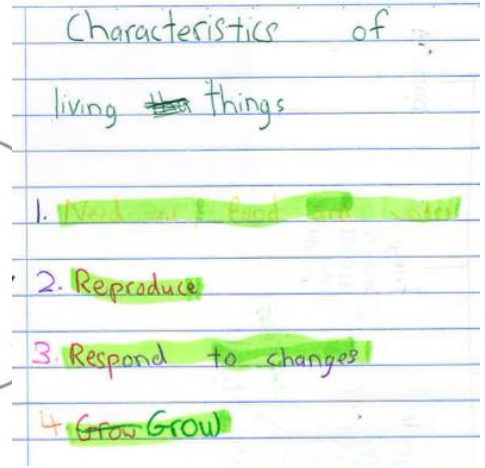


Name: Aeril Class: 4Respect

I used to think that
Matter doesn't have weight.

But now I know that matter has weight
mass.

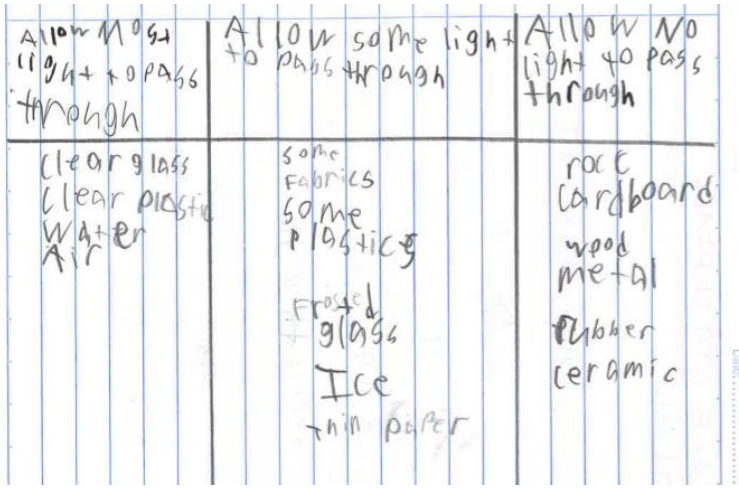
VTR



Characteristics of living things

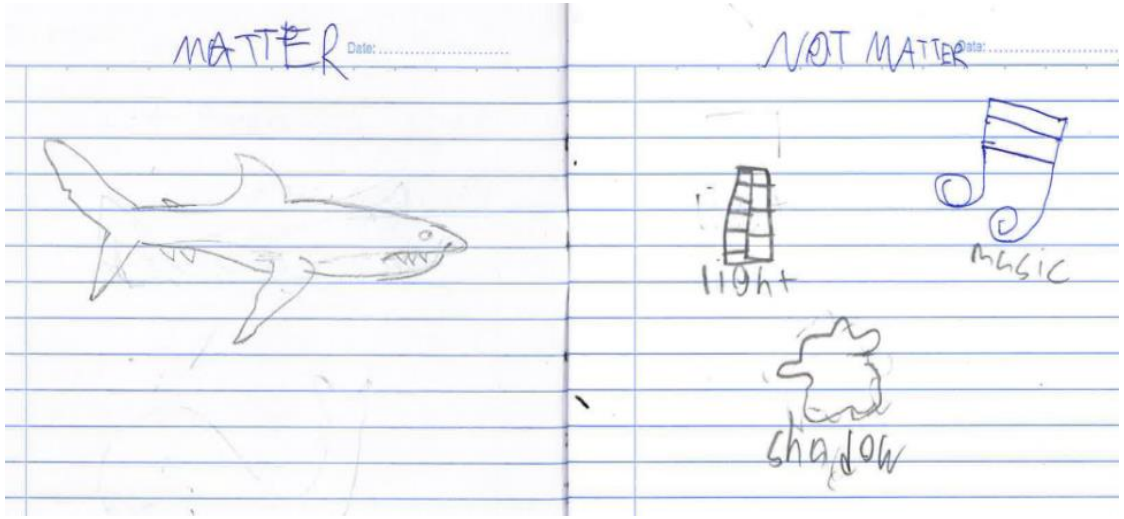
1. Need air, food, water
2. Reproduce
3. Respond to changes
4. Grow Grow

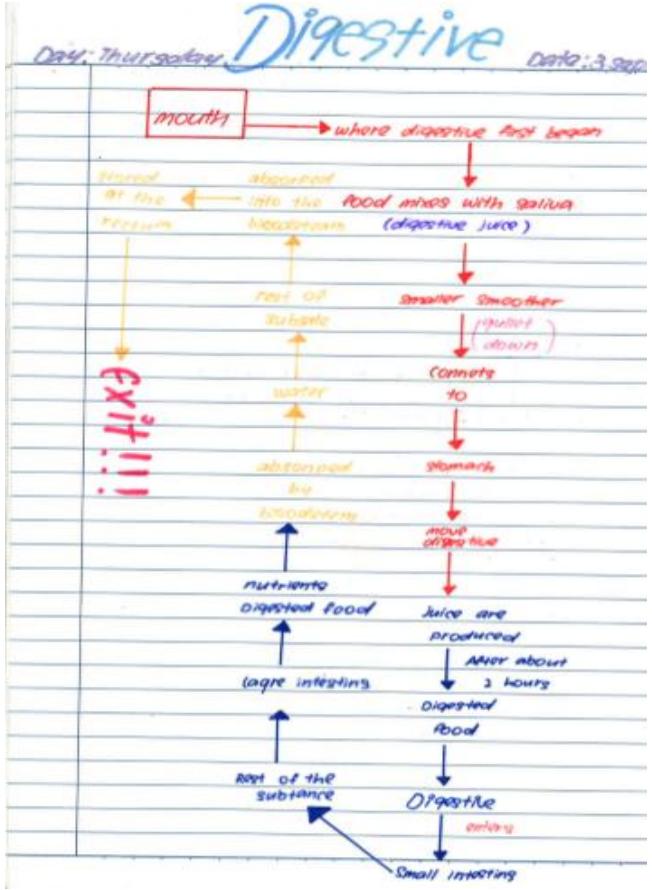
Quizzes



Allow most light to pass through	Allow some light to pass through	Allow no light to pass through
clear glass clear plastic Water Air	some Fabrics some plastics Frosted glass Ice thin paper	rock cardboard wood metal Rubber ceramic

Classification table





Students using different styles that they consolidate/validate their own learning

Tips on Parental Involvement

- Encourage curiosity

Encourage pupils to ask questions about things that happen around them. *Give praise* when a good question is asked. It is perfectly alright not to know the topic your child is interested in. The process of discovering new information and facts together encourage bonding.

- Be positive and supportive

If you can role model and display a genuine interest in science and how things work around us, it will have a positive impact on your child's attitudes towards science.

- Point out the everyday Science around us

Use everyday objects or phenomenon to highlight the connection and importance of science to the world we live in.

- Provide ample opportunities or stimulating environments for informal science learning

- family outings to Zoo, Botanic Gardens, Science Centre
- a short film shown on a television or video clip from an internet website
- visit the library

Thank You