

Hangzhou International School

INQUIRY BASED LEARNING 探究式学习

Presented by Cilla Giannopoulos

Presentation Outline 演讲概要

Points for Discussion

Background/Context 背景

The Future of Learning 学习前景

Introduction to PYP PYP 介绍

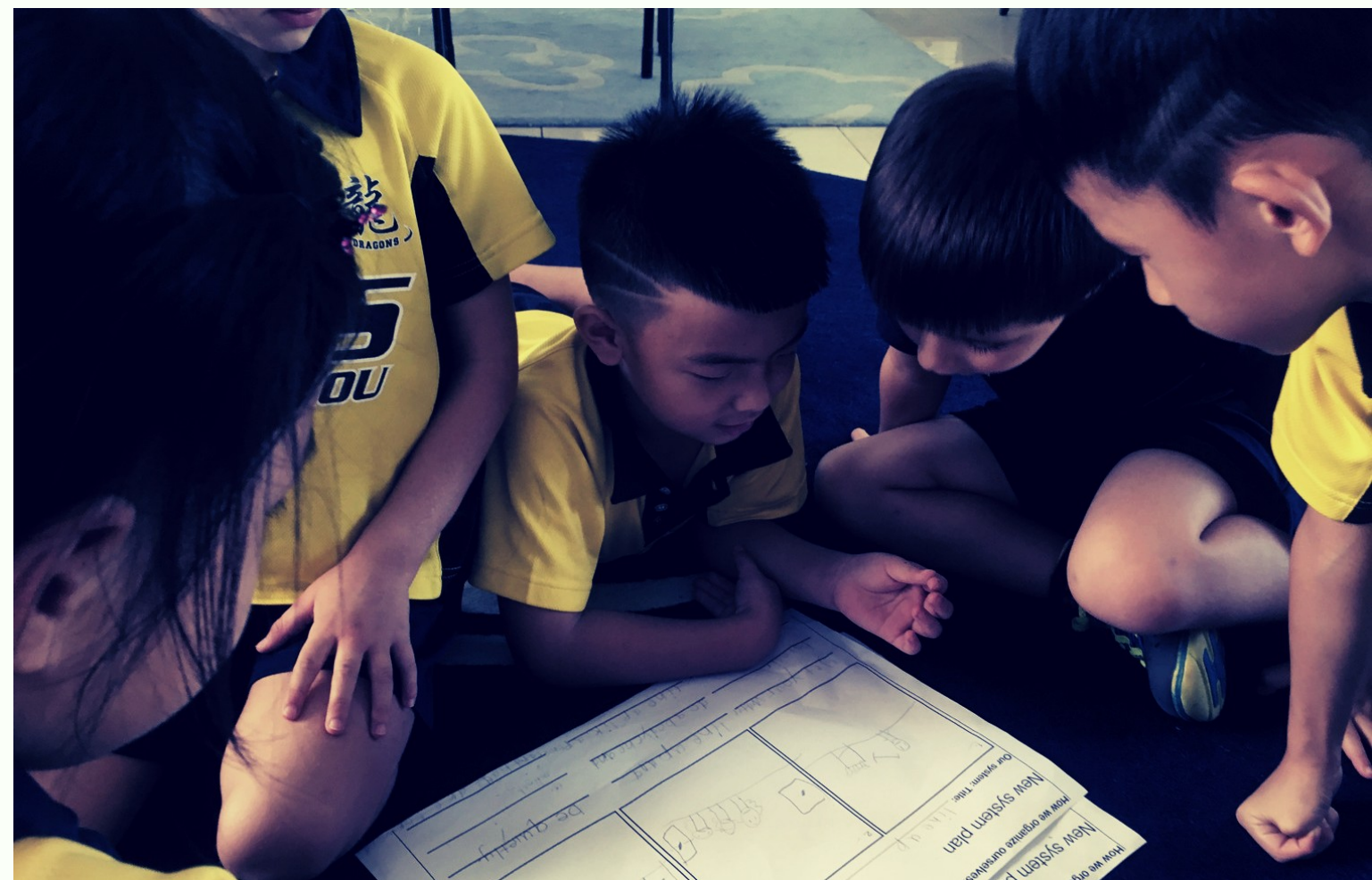
Components of PYP PYP 元素

Inquiry-based learning 探究式学习

Activity 活动

Discussion and Reflection 讨论反思

Questions 问题



Video Provocation

THE FUTURE OF LEARNING



Connect 关联

How are the ideas and information presented connected to what you already knew?

影片所展示的想法和信息是如何和你已知的相关联？

Challenge 挑战

What is still challenging or confusing for you to get your mind around? What questions, wonderings or puzzles do you now have?

导致你仍然难以理解的挑战和疑惑是什么？现在你有什么问题，疑惑或是困惑吗？

Extend 延伸

What new ideas did you get that extended or pushed your thinking in new directions?

你得到什么新的想法么？能把你的思维延伸或是推向一个新的方向的想法。

What skills will your child need to learn at school?

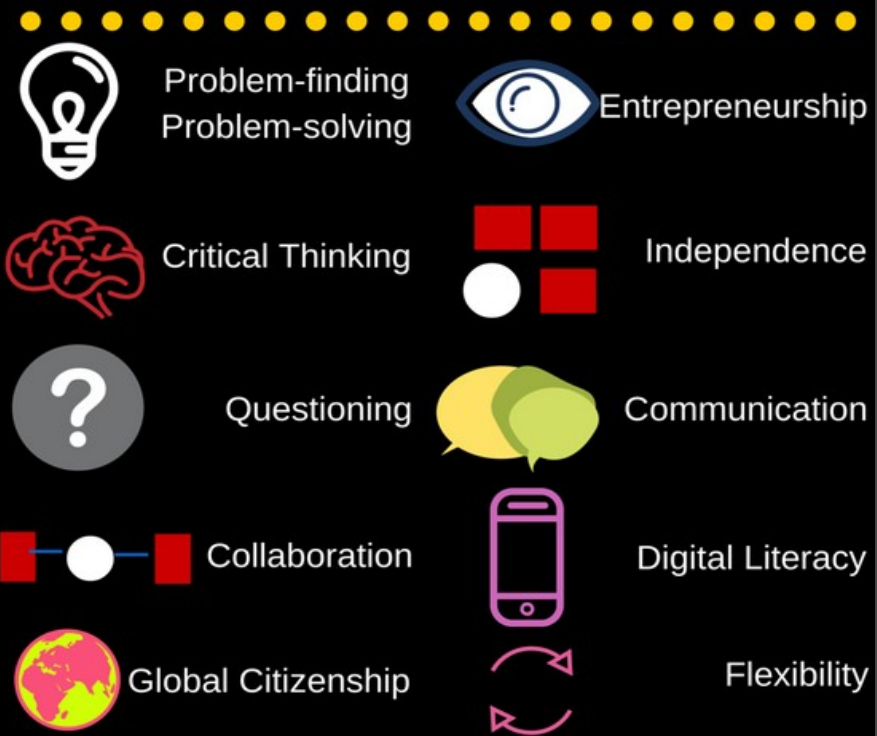
你的孩子在学校需要学习的技能是什么？

- THINK (LIST IDEAS)
 - PAIR (SHARE WITH PARTNER, CHOOSE TOP THREE)
 - SHARE (SHARE IN A FOUR, CHOOSE TOP TWO)
- 思考 (一分钟 思想清单)
 - 组队 (组队分享, 选出TOP3)
 - 分享 (四个人分享, 选出TOP2)

Implications for teaching 教学启示

- We do not need to teach children the answer.
- We need to teach children the skills to be able to use these answers and to sort, organise, classify, manage and critique them effectively.

21st Century Skills



CHILDREN WILL NEED TO
PREPARE FOR AN
UNCERTAIN FUTURE



Background/Context

背景

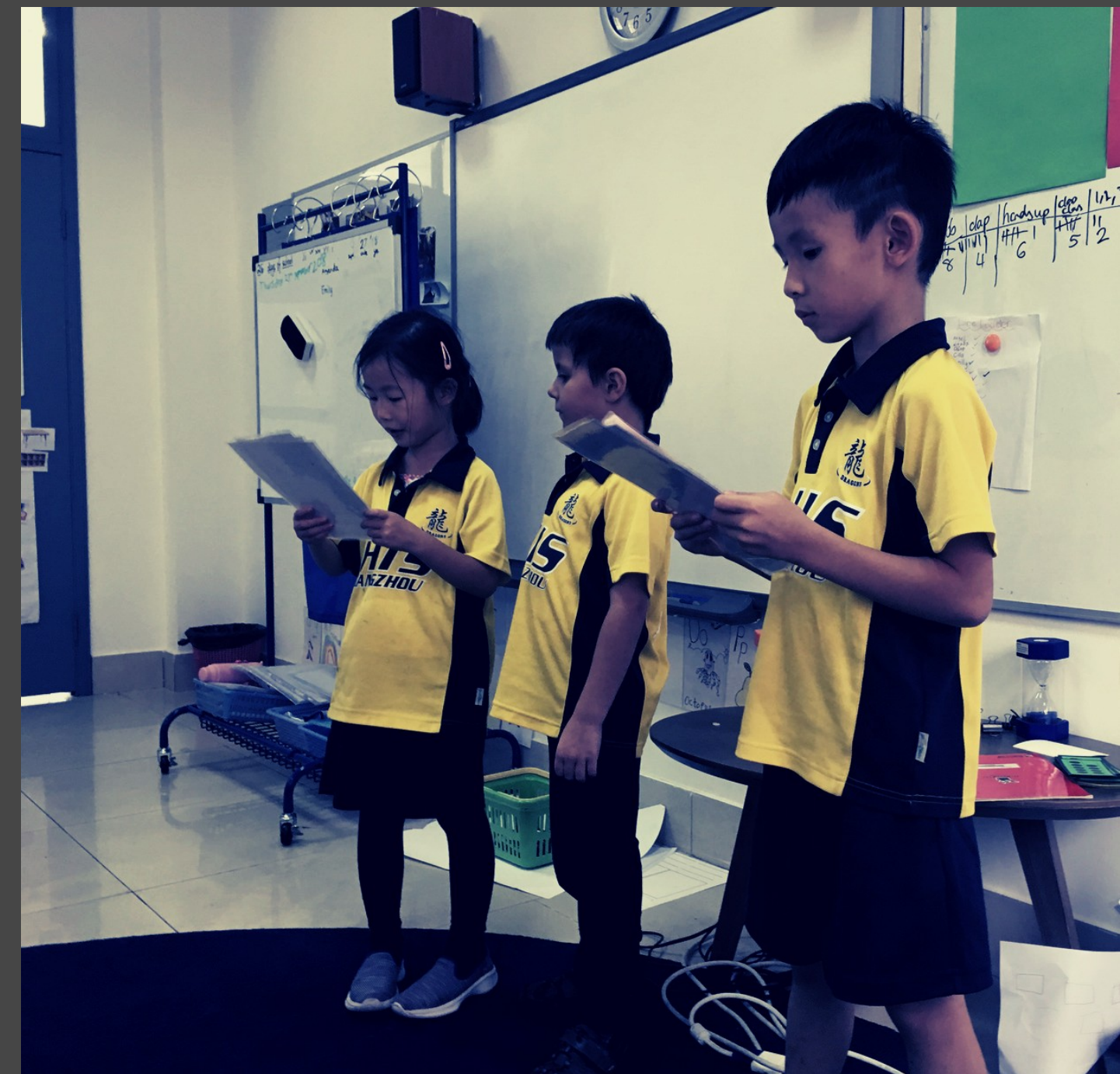
INTERNATIONAL BACCALAUREATE

IB使命宣言

The International Baccalaureate® aims to develop **inquiring, knowledgeable and caring** young people who help to create a better and more peaceful world through **intercultural understanding and respect**.

To this end the organization works with schools, governments and international organizations to develop **challenging** programmes of international education and rigorous assessment.

These programmes encourage students across the world to become **active, compassionate and lifelong learners** who understand that other **people, with their differences, can also be right**.



HANGZHOU INTERNATIONAL SCHOOL 2018

What is an IB education? IB教育是什么?

"An IB education is designed to develop inquiring, knowledgeable and caring young people who will help to create a better and more peaceful world. Today, as new global challenges emerge under an unprecedented pace of change, an IB education is more relevant and necessary than ever."

INTERNATIONAL BACCALAUREATE, WHAT IS AN IB EDUCATION?, P. 7





IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

As IB learners we strive to be:

INQUIRERS

We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

KNOWLEDGEABLE

We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

THINKERS

We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

COMMUNICATORS

We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

PRINCIPLED

We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

OPEN-MINDED

We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

CARING

We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

RISK-TAKERS

We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

BALANCED

We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

REFLECTIVE

We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

The IB learner profile represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help individuals and groups become responsible members of local, national and global communities.



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国际文凭学习者培养目标

所有国际文凭教育项目的目标都是培养具有国际情怀的人，他们承认人类共有的博爱精神，分担守护地球的责任，帮助开创一个更美好、更和平的世界。

作为国际文凭学习者，我们要努力做到：

积极探究

我们培养自己的好奇心，逐步掌握开展探究和研究的技能。我们知道如何独自或与他人一起开展学习。我们对学习充满热情，并终身保持对学习的热爱。

知识渊博

我们发展并利用对概念的理解，跨越一系列学科探索知识。我们对各种具有当地和全球重要性的问题和思想观点进行探讨。

勤于思考

我们运用批判性和创造性思考技能，对复杂的问题进行分析并采取负责任的行动。我们积极主动地做出理由充分、合乎伦理的决定。

善于交流

我们使用一种以上的语言，以多种方式充满信心和富有创意地进行自我表达。我们有效地开展协作，注意倾听他人以及其他群体的观点。

坚持原则

我们处事正直、诚实，有强烈的公平和正义感，尊重世界各地人民的尊严和权力。我们对自己的行动及其后果承担责任。

国际文凭学习者培养目标阐述了国际文凭世界学校所重视的十种特质。我们相信这些特质，以及与它们相似的其它品质，能够帮助人们成为当地、国家和全球社区中负责任的成员。

胸襟开阔

我们以批判的态度欣赏我们自己的文化和个人的历史，以及他人的价值观和传统。我们寻求和评价一系列广泛的观点，并愿意通过体验来丰富自己。

懂得关爱

我们表现出同理心、同情心和尊重。我们努力开展服务，通过我们的行动使他人的生活和我们周围的世界发生积极的变化。

勇于尝试

我们深谋远虑和坚决果断地应对变化不定的事物。我们独立地或通过合作探索新的思想观点和新颖的策略。面对挑战和变化，我们表现得足智多谋和灵活机敏。

全面发展

我们理解在生活中做到智力、身体和情感均衡发展的重要性，这样才能使我们自己和他人幸福康乐。我们认识到自己与他人以及我们所处世界的相互依存关系。

及时反思

我们对世界和自己的思想观点和经验做出深刻缜密的思考。为了支持我们的学习和个人发展，我们努力了解自己的长处和弱点。



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Learner Profile

Choose two attributes that best reflect you

Introduce yourself and your attributes to two other people.

学习者培养目标

Choose two attributes that best reflect you
选择两个最能反映你品质的培养目标，

向另外两个人介绍你自己和你的品质。





Inspiration

"Children grow into
the intellectual life of
those around them."

Lev Vygotsky



Approaches to Learning 学习方式

Developing skills in all areas through a variety of experiences

Social Skills

Accepting responsibility, Respecting others, Cooperation, Resolving conflict, Group decision making, Adopting a variety of roles

Communication Skills

Listening, Speaking, Reading, Writing, Presenting, Viewing, Non-verbal communication

Research Skills

Formulating questions, Observing, Planning, Collecting data, Recording data, Organizing data, Interpreting data, Presenting research data

Thinking Skills

Acquisition of knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation, Dialectical thought, Metacognition

Self-management Skills

Gross motor, Fine motor, Spatial awareness, Organization, Time management, Safety, Healthy lifestyles, Codes of behavior, Informed choices

How The World Works 世界如何运行

Central Idea: 中心思想:

People apply scientific principles to invent and innovate.

人们运用科学原理进行发明和创造。

Your challenge 你的挑战

Create a boat that can float while holding the most paper clips.

创造一只可以承载最多回形针的船。

Time Limit 时间限制

10 minutes

Materials 材料

- Play dough
- Pipe cleaners
- Card paper
- Tape
- Straws
- String
- Popsicle sticks



Reflecting on the experience

反思经验

What did you notice?

你注意到什么？

What skills did you use?

你用到哪些技能？

What knowledge did you
need?

你需要哪知识？

下一步？

Where to next?

Links to curriculum areas

English

READ:
CONNECT TO LITERATURE:
READ: WHO SANK THE
BOAT ?;MR ARCHIMEDES 'BATH, NON FICTION
TEXT ABOUT BOAT S T
HROUGHOUT HISTORY

WRIT E: INST
RUCTIONS - HOW TO
MAKE A BOAT .
NARRAT IVE - STORY
ABOUT A BOAT . EXPLANAT
ORY - REASONS WHY THE
BOAT FLOAT S AND THE
BES TTYPES OF DESIGNS

S PEAKING AND
LISTENING :
SHARE IDEAS ,GIVE
FEEDBACK, GIVE
REASONS WHY .

G O THROUG H DES IG N
PROCES S:EMPAT HIZE,
DEF INE, IDEAT E, PROT
OT YPE, REF INE. LOOK AT
BOAT DES IG NS THROUG
HOUT HIS TORY WHY ARE
SOME DES IG NS USED
AND OTHES AREN'T.

technology

Science

EXPL ORE ARCHIMEDES
PRINCIPL E: UPWARD
BUOYANT FORCE THAT IS
EXERT ED ON A BODY
IMMERS ED IN A FLUID,
WHET HER FULL Y OR
PARTIALLY SUBMERGED,
IS EQUAL TO THE WEIGHT
OF THE FLUID THAT THE
BODY DIS PLACES AND
ACT SIN THE
UPWARD DIRECT ION AT
THE CENT ER OF MASS OF
THE DISPLACED FLUID.

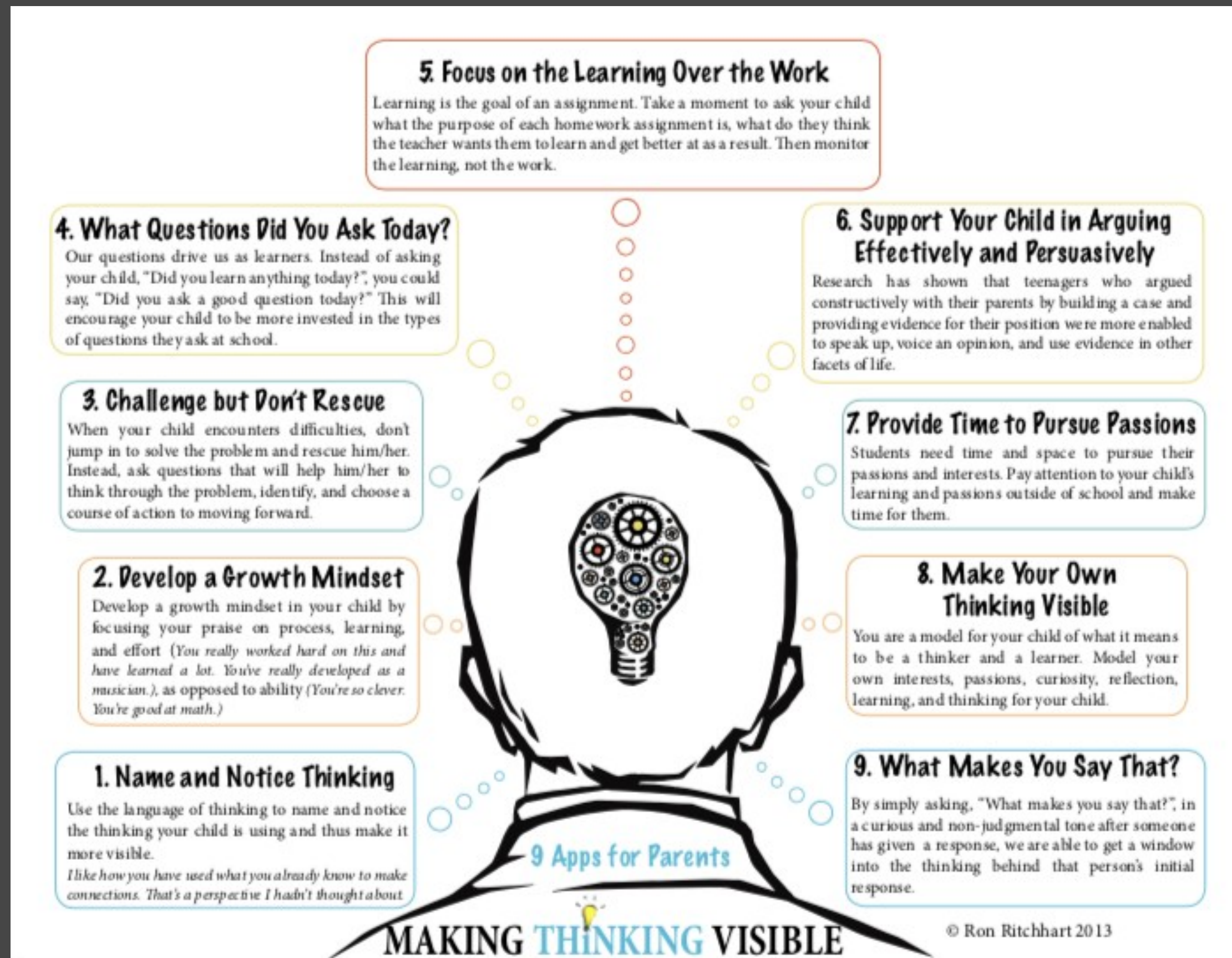
Mat hs

DATA ANAYLSIS
-WHOSE BOAT WAS THE
HEAVIES T?GRAPH IT .
DISCUSS
-COUNT PAPER CL IPS ,
CREAT E TENS AND ONES
-DIS CUS S UNIT S OF
MEAS URES AND ST
ANDARD UNITS OF
MEASURE.

ar t

LOOK AT EXAMPLES OF
BOAT DESIGN
DESIGN A BOAT
REFINE DESIGN.

How can you help?





Thank you

"Education is not
preparation for life;
education is life
itself."

John Dewey

QUESTIONS? 问题?

What are your burning questions?
These will be used to guide future
presentations.

