45 years
Education for a better world

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IB AFRICA, EUROPE & MIDDLE EAST REGIONAL CONFERENCE 2013

THE HAGUE 24TH - 27TH OCTOBER

design: igniting minds and impacting lives

andrew mayes

MYP curriculum and assessment manager: design and PHE

DP curriculum manager: design technology

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educate
create

background

design, and the resultant development of new technologies, has given rise to profound changes in society:

- transforming how we access and process information;
- how we adapt our environment;
- how we communicate with others;
- how we are able to solve problems;
- how we work and live.

some things to think about

the nature of design

- what is design?
- what is the role of science and technology in design?
- what are the characteristics of a good designer?

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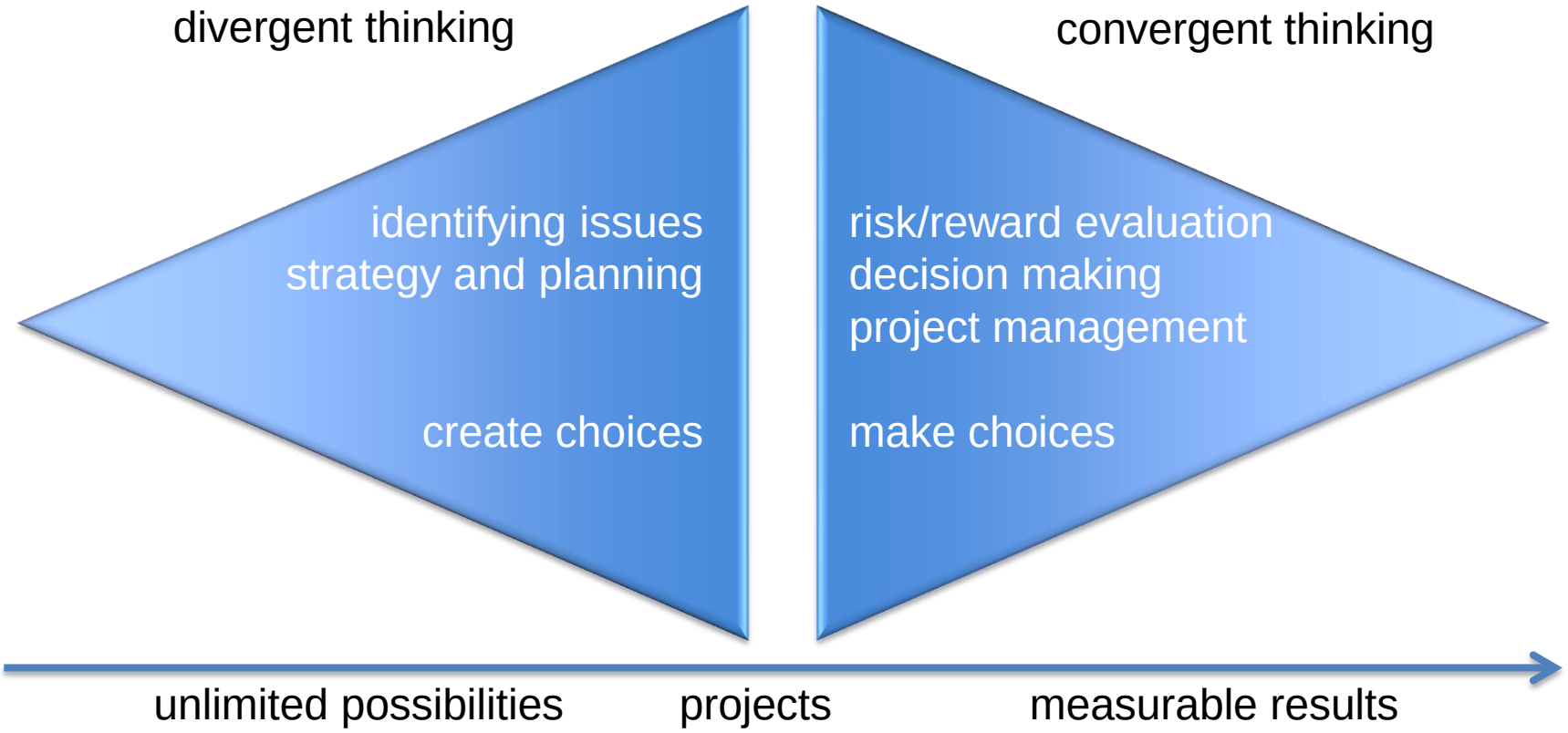
design thinking concepts

- solution-focused thinking
- divergent and convergent thinking
- design thinking stages
  - immersion
  - ideation
  - prototyping

solution-focused thinking

divergent versus convergent thinking



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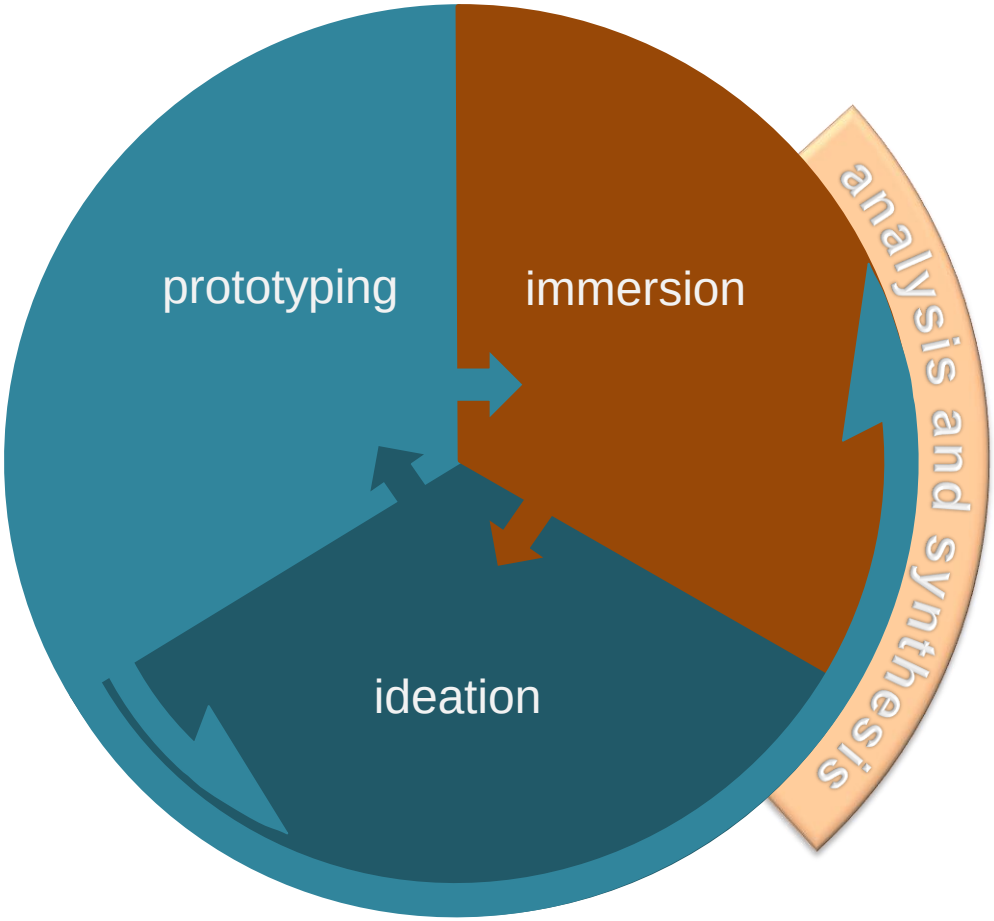
design thinking

"[Design thinking is] a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity."

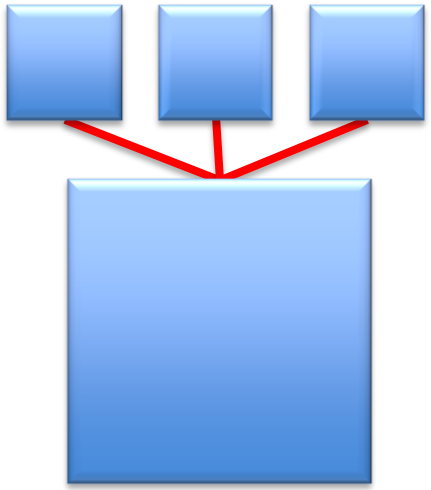
Tim Brown, IDEO



design thinking

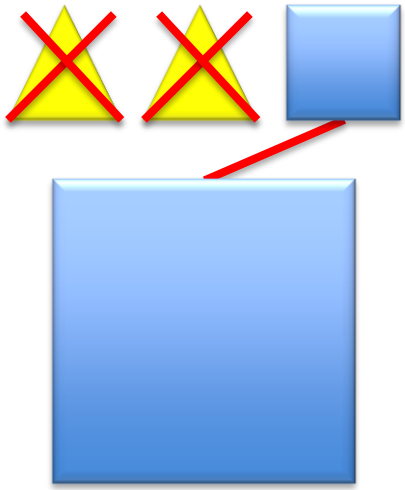
- structures thought processes of designers, and draws on abductive reasoning

inductive



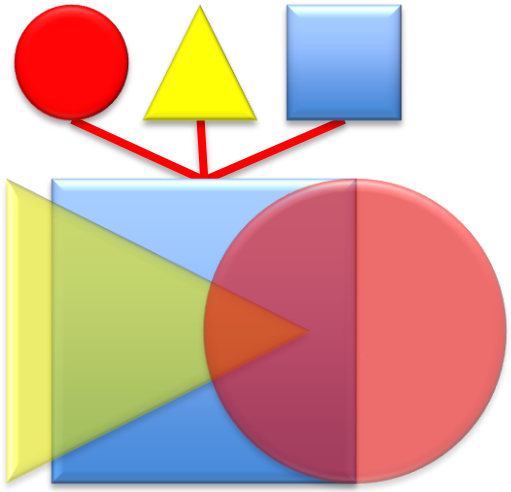
generalize existing ideas

deductive



narrow down existing choices

abductive



create space to generate new ideas

immersion

preliminary immersion

define and reframe problem
develop understanding of the context

in-depth immersion

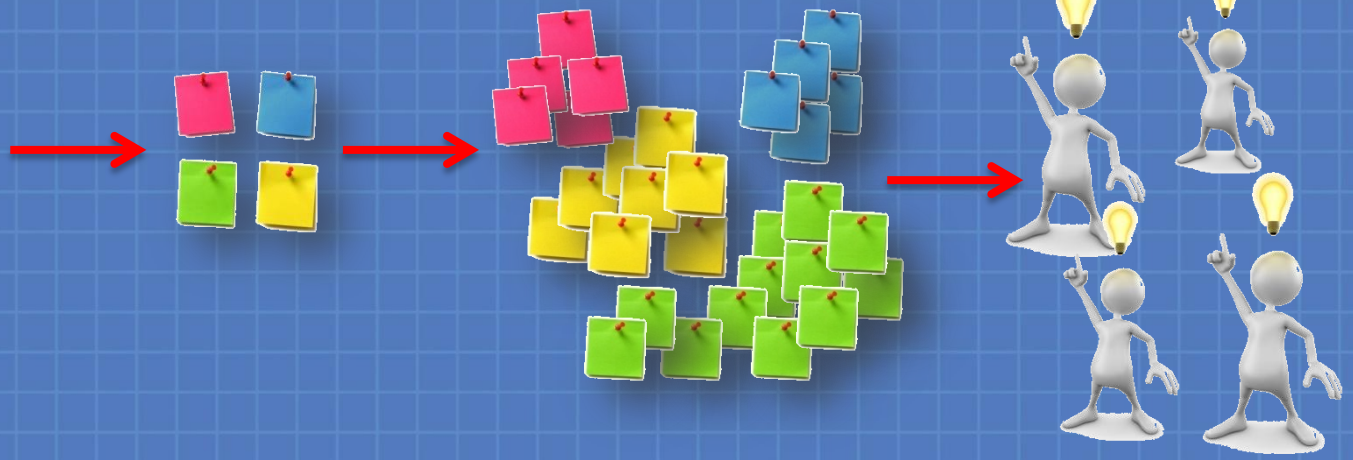
identify needs and opportunities
“what do people say?” “how do they act?” “what do they think?” “how do they feel?”

analysis and synthesis

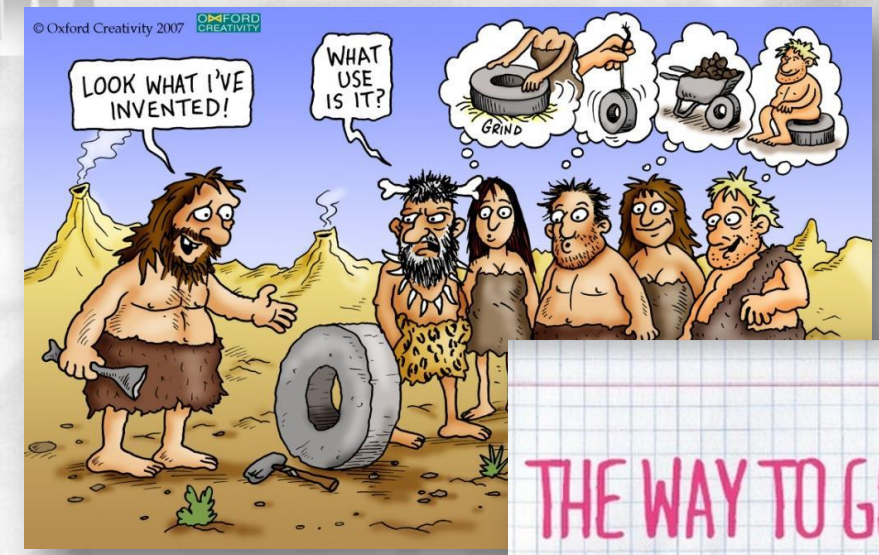
information → insight → idea

insight is a finding that results from immersion – the identification of an opportunity

an idea is a solution generated in response to one or more insights



ideation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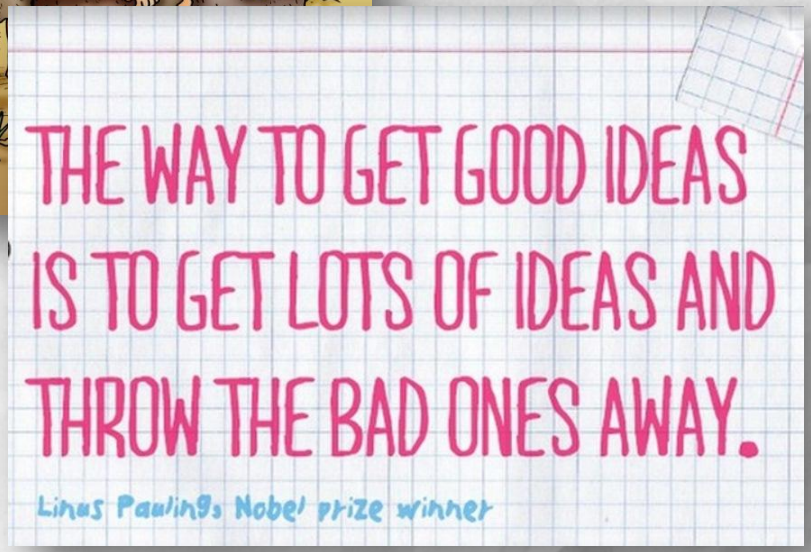
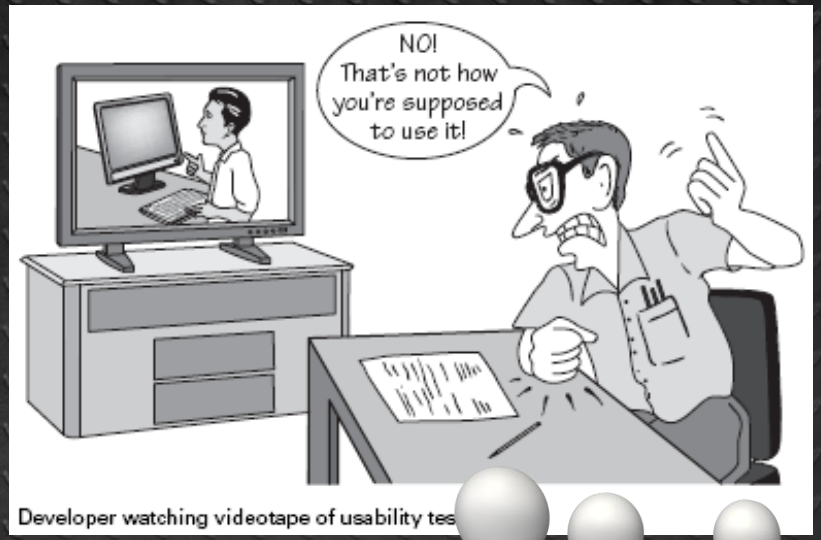
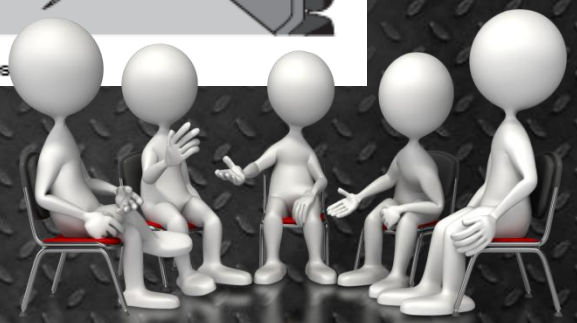
LOOK WHAT I'VE INVENTED!
WHAT USE IS IT?
GRIND


THE WAY TO GET GOOD IDEAS IS TO GET LOTS OF IDEAS AND THROW THE BAD ONES AWAY.
Linus Paulings Nobel prize winner

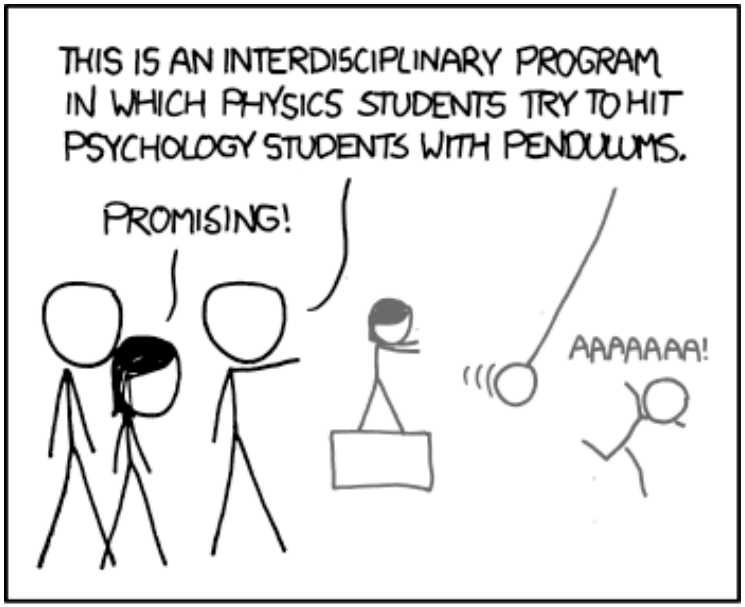
prototyping

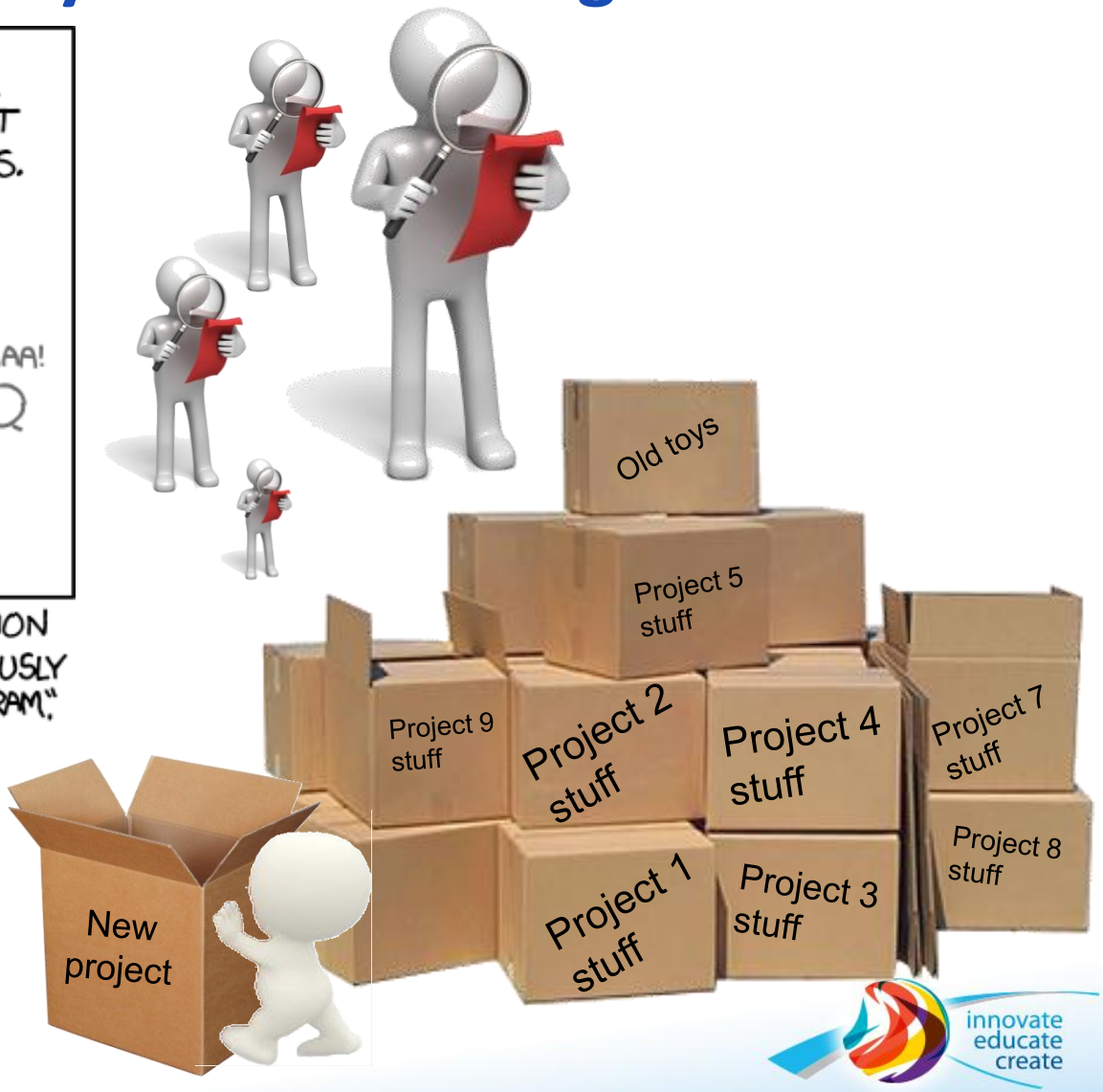




prototypes (fidelity) + testing (context) = prototyping (validation)

the interdisciplinary nature of design





educate
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design thinking

immersion
analysis and synthesis

approaches to learning

critical thinking
research
organization
metacognition
transfer
affective skills

IB learner profile

inquirer
thinker
knowledgeable
balanced

design thinking

ideation

educate innovate

approaches to learning

creative thinking
communication
reflection
critical thinking

IB learner profile

communicator
open-minded
principled
caring

innovate
create

design thinking

prototyping

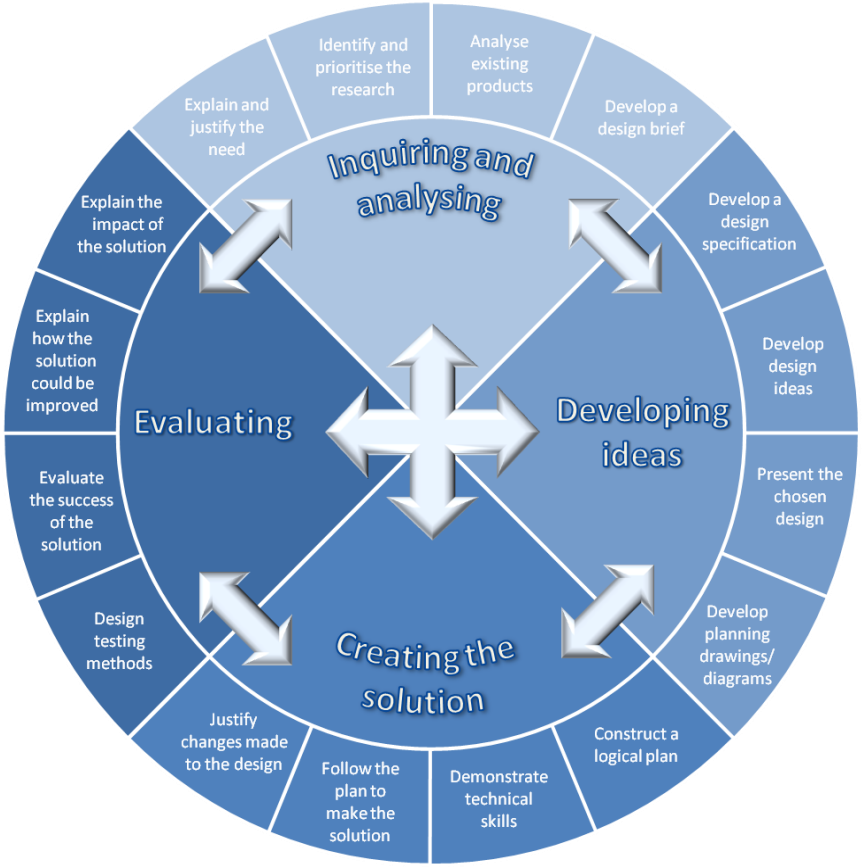
approaches to learning

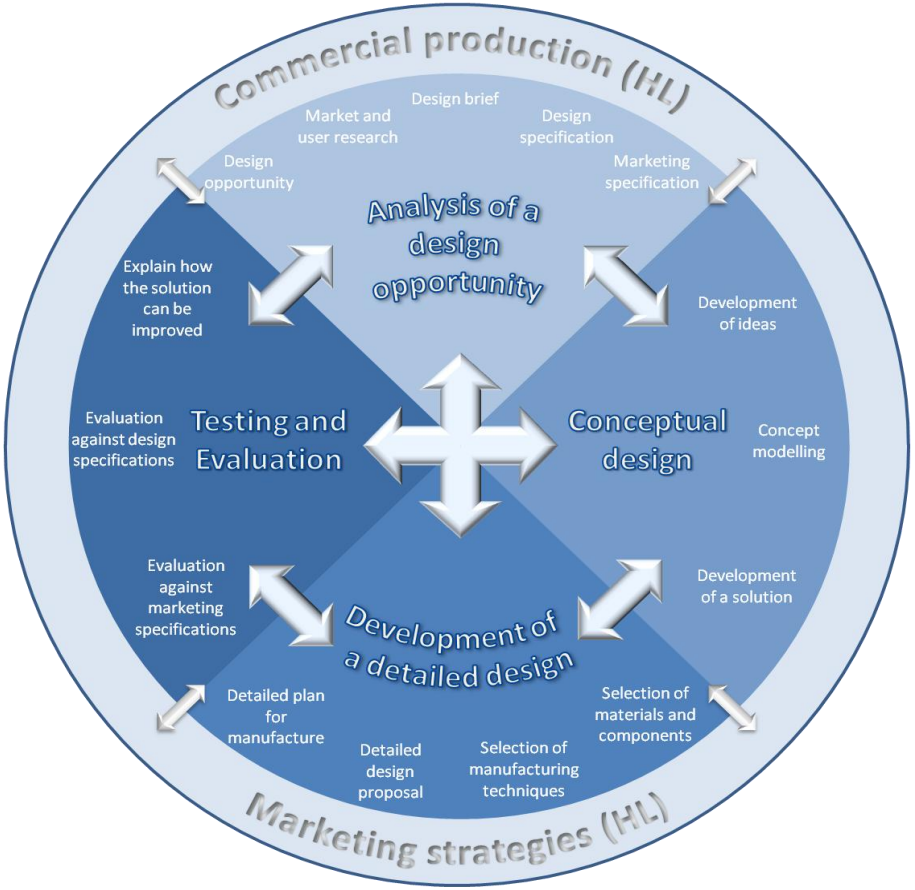
critical thinking
research
affective skills
social skills

IB learner profile

risk-taker
reflective

design in the IB





MYP design conceptual framework

development communities

Key concepts

systems communication

adaptation resources

form perspective

innovation

function **Related** sustainability

ergonomics **concepts**

evaluation collaboration

invention markets and trends

DP design technology topics

design as a tool

design as a universal language

design as a way of thinking

design as a way of knowing

design as a way of doing

design as a way of life

questions

how was design important in the past?

how is design important today?

how will design be important for the future?

which aspects of design literacy, design thinking and the nature of design are important for 21st century learners?

design thinking resources

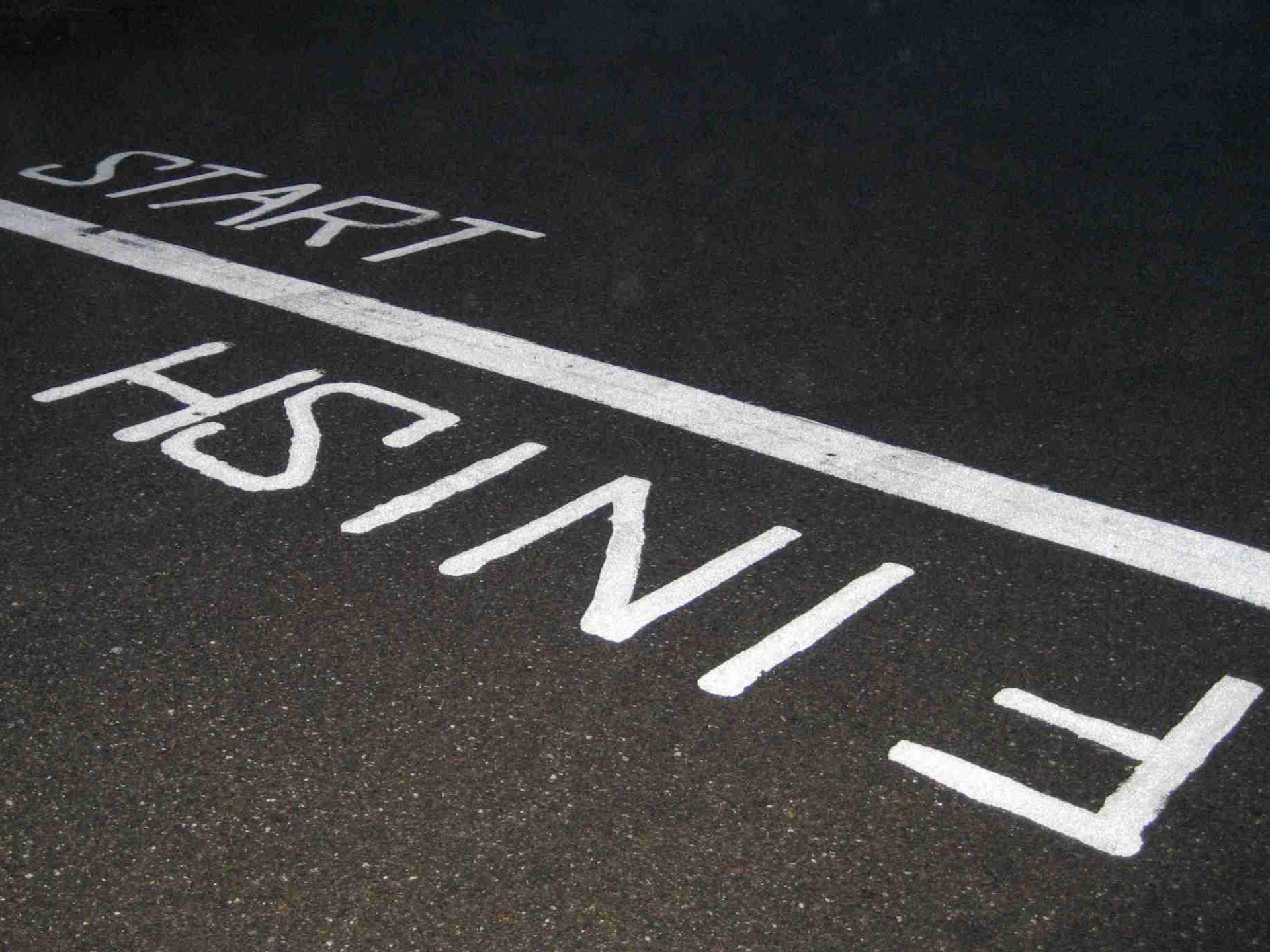
Cross, N. 2006. *Designerly Ways of Knowing.* London, UK. Springer.

Cross, N. 2011. *Design thinking: Understanding How Designers Think and Work.* London, UK. Bloomsbury Academic.

Lawson, B. 2005. *How Designers Think: The Design Process Demystified*. (Fourth Edition). Oxford, UK. Architectural Press.

Martin, R. 2007. *The Opposable Mind: How Successful Leaders Win Through Integrative Thinking.* Boston, USA. Harvard Business School Press.

Vianna, M. Vianna, Y. Adler, I. Lucena, B and Russo B. 2011. *Design Thinking: Business innovation.* Rio de Janeiro, Brazil. MJV Press.


START
FINISH