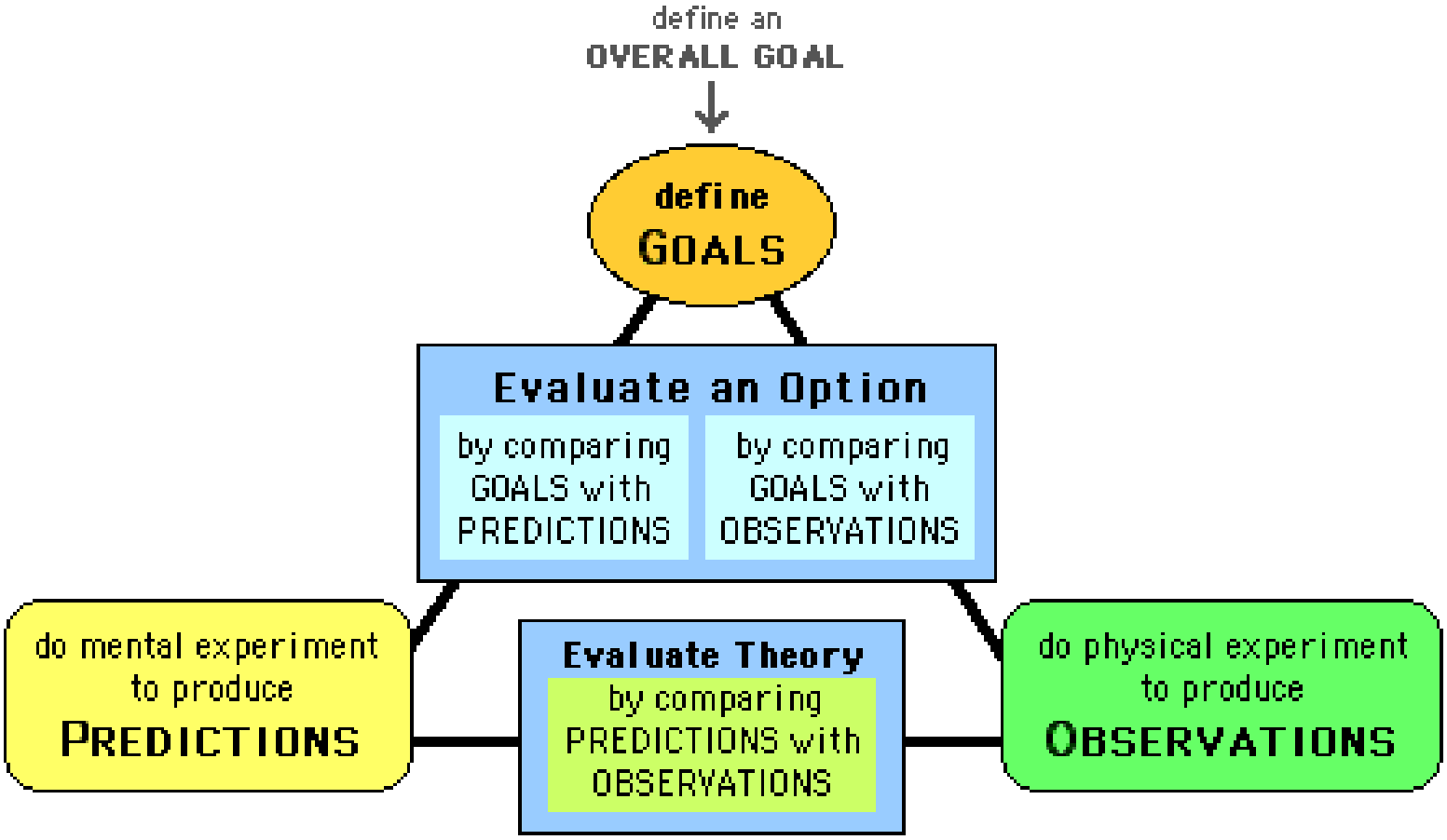
Teaching
Christian Stewardship
using **Design Method**

by Craig Rusbult
for Annual Meeting of ASA,
at Baylor University, August 2, 2009.

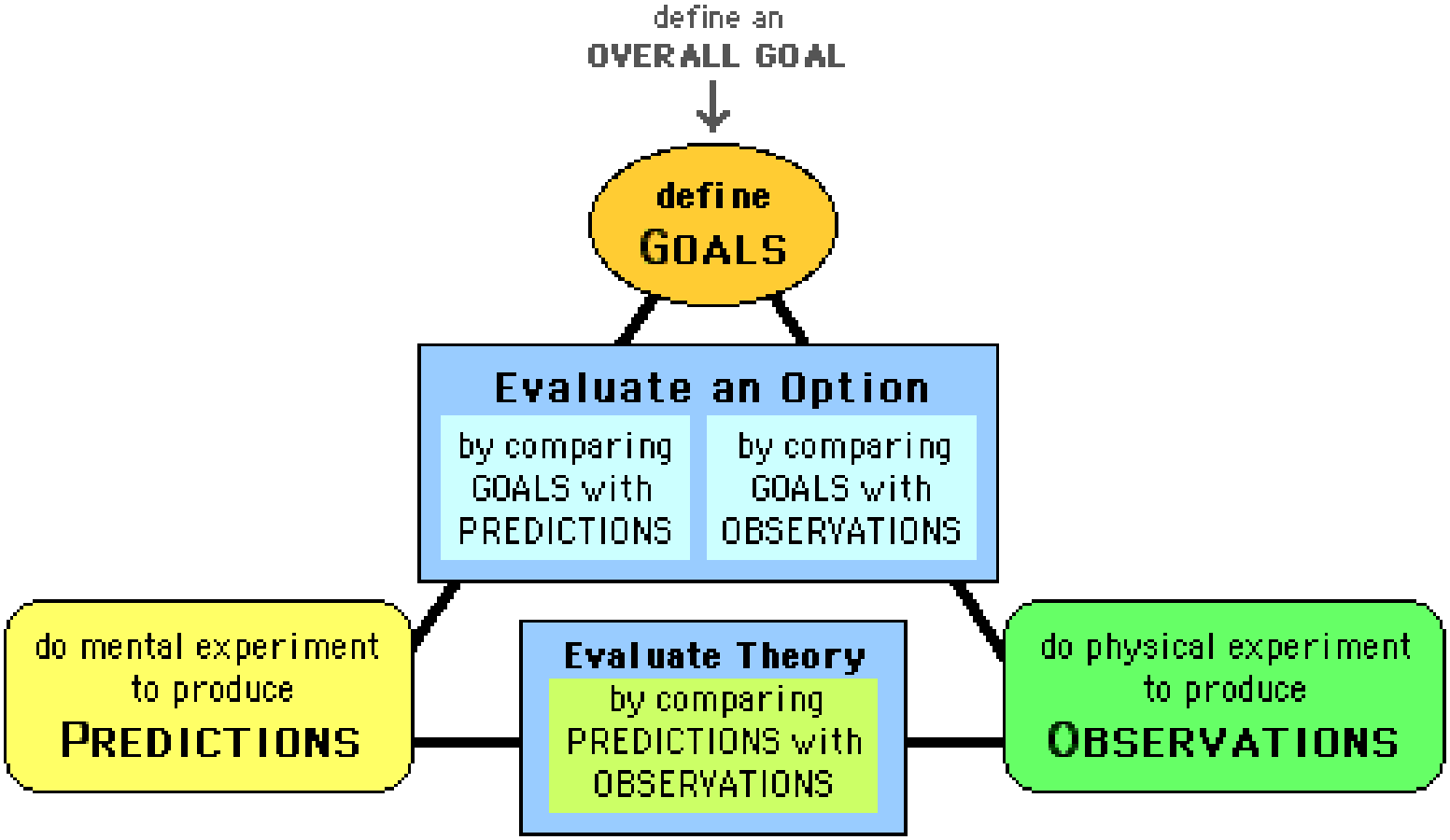
A logical extension of
my PhD dissertation
(about **Scientific Method** and its
potential applications in education)
is a model of **Design Method**
for ***problem solving***
in most areas of life,
for the design of a
product, strategy, or **theory**.

Introduction to Design Method
[google: design method in education] #1
[www.asa3.org/ASA/education/think/intro.htm]

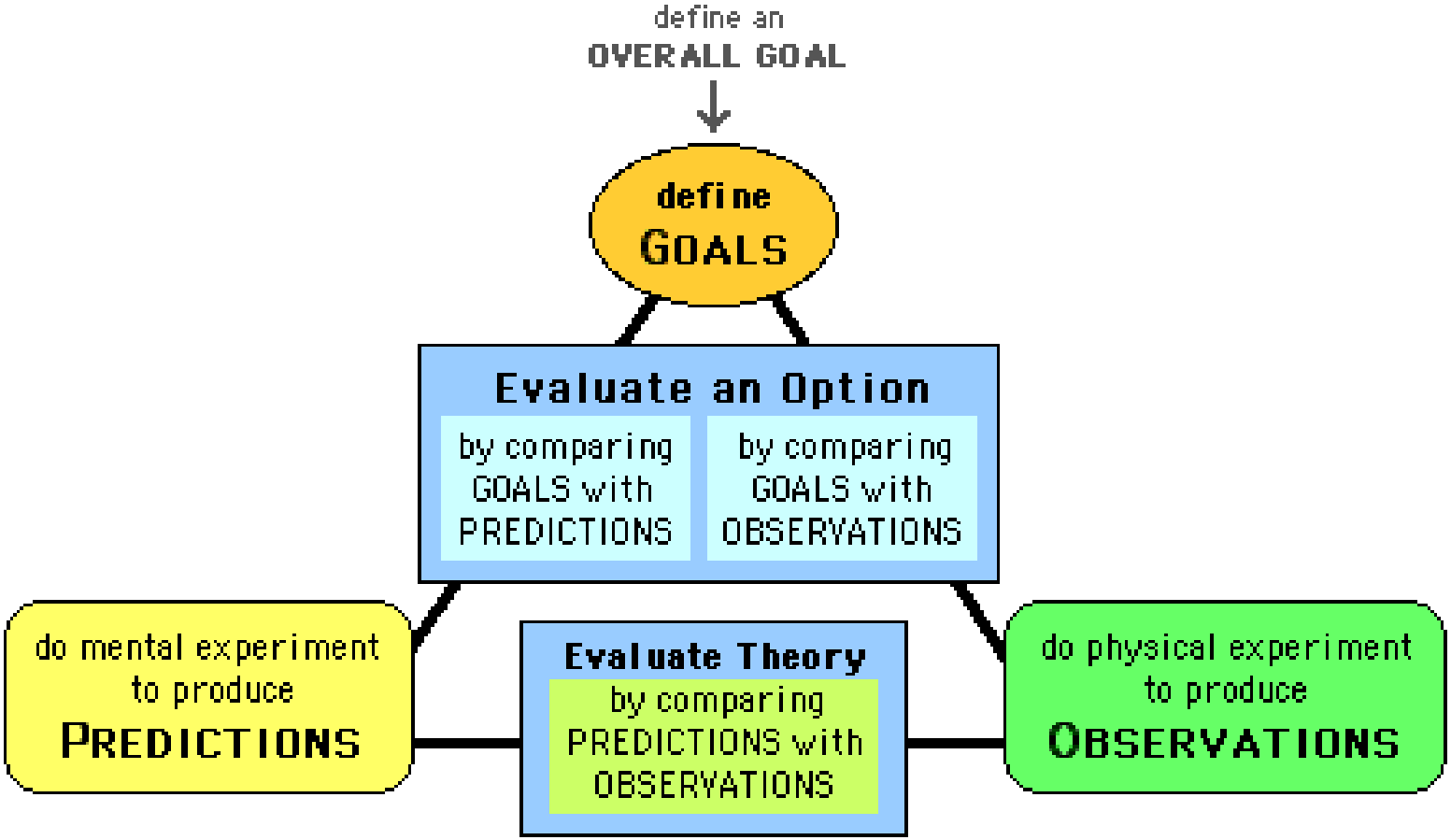
In design method you define a **PROBLEM**
{if NOW ≠ GOAL} (an **opportunity** to make things better)
and **GOALS** (decide & describe the desired characteristics of a "solution" that would make things better) (what is wanted?)



generate options for a solution, and for each option
COMPARE your goals with
predictions (from **mental experiments**), and/or
observations (from **physical experiments**),
and then analyze-and-evaluate, and **DECIDE**.

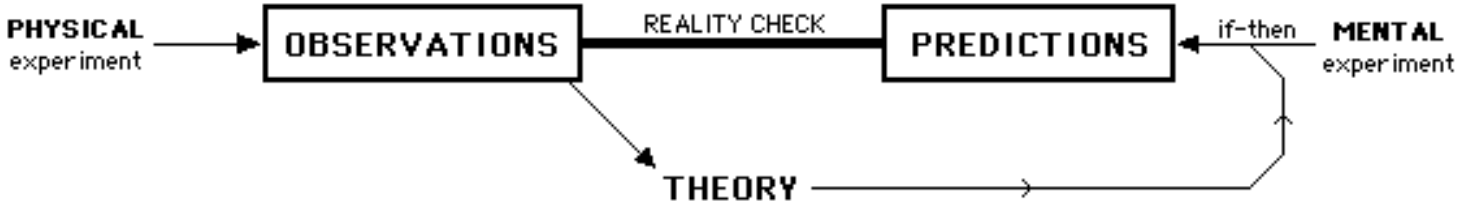


Design Method is a framework that promotes **creative-and-critical improvisational thinking**.
The "method" is like a flexible improvising hockey skater, not a rigid choreographed figure skater.

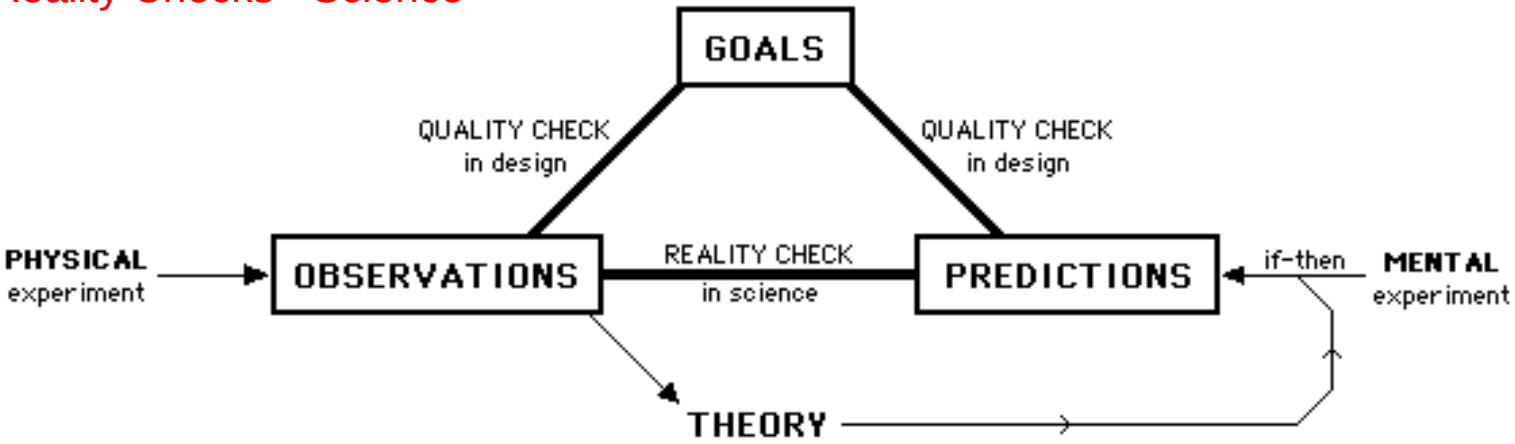


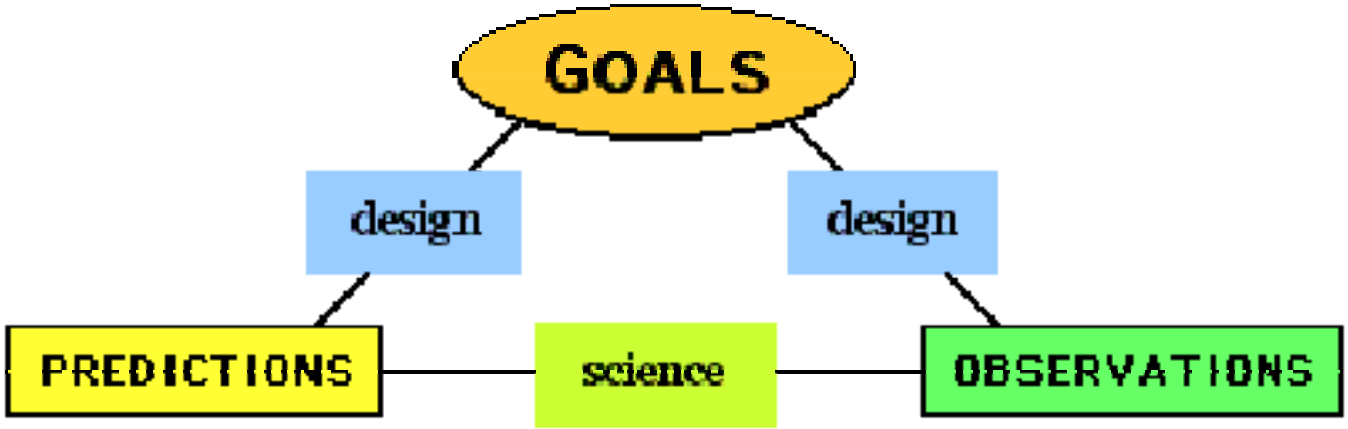
Design method is a framework that promotes creative-and-critical improvisational thinking, so it is useful in a **thinking skills curriculum**. (between classes or within a class)

A model of
Design Method
connects DESIGN
(in engineering and other fields)
with SCIENCE
which is the
designing of theories about nature
based on **REALITY CHECKS** that test whether **the way you think the world is** (according to the theory you're testing) matches **the way the world really is**.

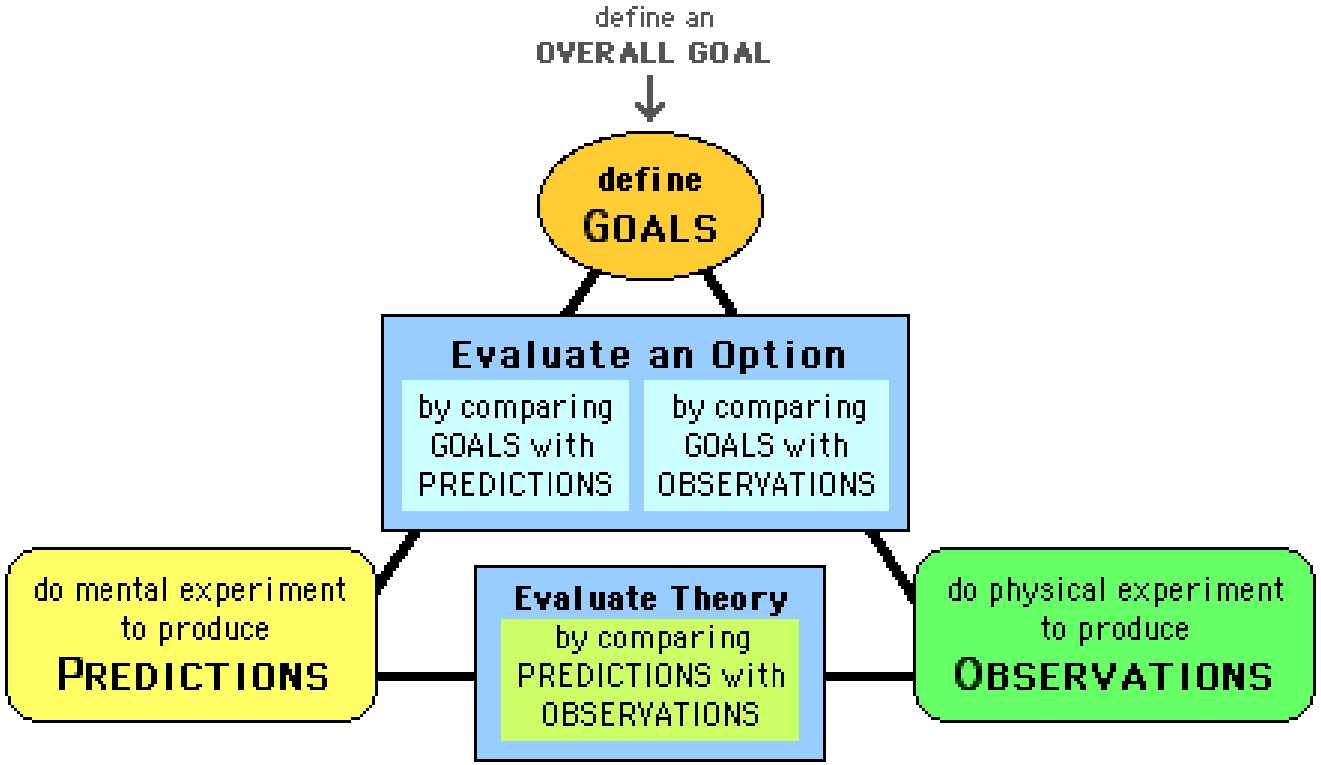


Quality Checks - Design
Reality Checks - Science

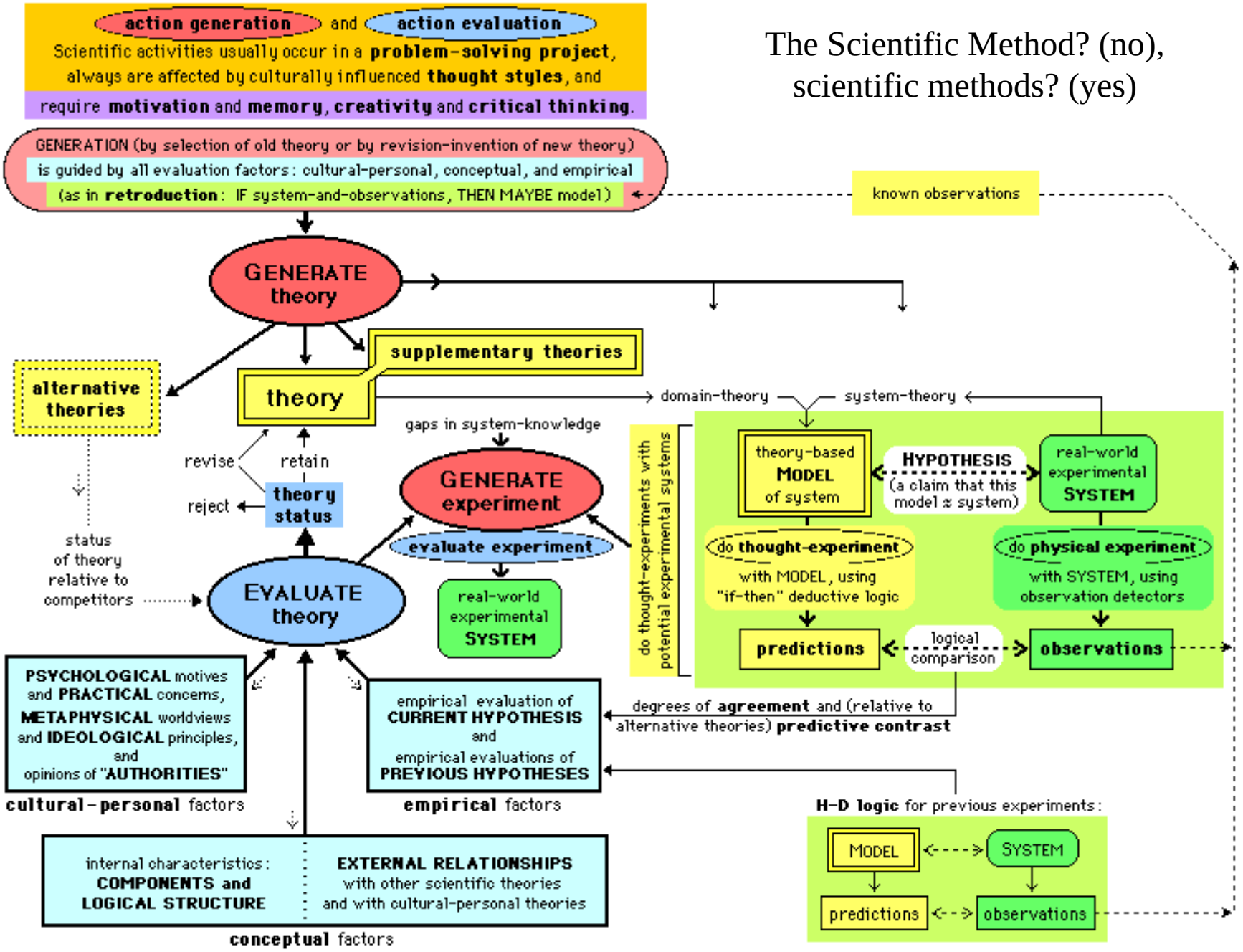




a MODEL can be taught at different levels of detail



The Scientific Method? (no), scientific methods? (yes)



You can use Design Method in a
thinking skills curriculum.
(coordinated between classes, or within your class)

Design can be repeated in the same course,
with different problems, to help students learn a
disciplined approach to problem solving.

Goal-Directed Education: 1) Provide Opportunities to Learn,
2) Direct Attention to what can be learned. [google]

And because **design is used in all subject areas**, **design method can be used as a transitive connector between areas**,
to facilitate **transfer of thinking skills**,
which should be a major goal of education.

For more, google [design method in education].

Finding effective solutions for
ENVIRONMENTAL PROBLEMS
requires **flexible non-specialized thinking**,

and DESIGN METHOD
provides an **integrative structure** for a
disciplined interdisciplinary solution-seeking process.

usually, environmental problems have broad scope,
complex with multiple factors (in wide range of fields)

result of design can be:
PRODUCT = new technology
THEORY (ex: Global Warming)
STRATEGY = Policy Decisions
(maybe to use an old technology)

STRATEGIES = Policy Decisions at different levels

(**private** - individual, family, church, business)

(**government** - city, county, state, national, international)

We'll look at design method and education in the context of current environmental challenges with examples for energy conservation, global warming: **cooling (Cool Biz)** & Warm Biz (warming) to illustrate appropriate use of science & technology.

Cool Biz - less use of air conditioning in summer,

Warm Biz - less use of heating in winter. (65°)

Cool Biz seems more interesting for me, because cold weather can be dangerous, heating is NEEDED, hot weather can be bothersome, cooling is WANTED.

Air Conditioning is LUXURY ITEM. (personal

Cool Biz — Ideas & Facts

GOVERNMENT in Japan, 2005 (to now?)

set air conditioning at 28 C = 82 F

short-sleeve shirts, no jacket or tie (these are the main clothing policies)

+ extra tips: trousers (breathe & absorb moisture), starch collars (so stand up)

CULTURE IN **JAPAN**

• no suit & tie = not dignified for self, not respectful of others

govt workers awkward in public (commute, meeting w private business people)

Prime Minister Koizumi - interviews w no tie or jacket, advertising for CBz, PR

"Concerned about global warming, Japanese customers avoid firms with chilly temperatures during the summer season, considering such energy use wasteful and even shameful." ("equivalent of unnecessary trips in gas-guzzling automobiles")

*Would this be the response in **US**? or would customers go to the cooler stores?*

Jimmy Carter, Warm Biz 1977 - turn thermostat down to 65°(minimal response?)

PRIVATE - 3 largest banks (1630 branches) in Japan

also - **South Korean** Ministry of Environment, **British** Trades Union Congress

Baylor? dorm room = 71 F (22 C),

Cool Biz — Ideas & Facts (continued)

results: CO2 drop: 2005 (1.0 million households for 1 month), 2006 (2.5 million)

POSSIBLE DISADVANTAGES:

- **decrease in efficiency** of workers?

- **negative health effects**? (tough on overweight people, with more insulation)
  drink **water**, use **fan** (improve natural physiological cooling-evaporation)
  psychology (if think + or – , likely to be + or – ? (individual physiology?)
  ex: me in WI (no AC, 3rd floor, 78-95), summer 1995 (>98, all day ok), training

Consider the effects of ETHICAL PRINCIPLES:
[google: christian worldview education]
[www.asa3.org/ASA/education/views/wvb.htm]

• **greatest good** for **greatest number**
(but who decides “greatest good” & enforces policy?)

• **Rawls** - Veil of Ignorance - imagine policy decisions
if you don’t know: who, where, what, how much,…

• **Game Theory** — ex: game, cooperators versus renegades;
if all cooperate the average payoff is highest, but
if one (or more) renegades, they gain & others lose;
what happens? after awhile, more & more stop cooperating.
--> Patty (bothered, irrational for people to not cooperate),
U.S. Constitution (acknowledge sin, use power-checks).

Tragedy of the Commons:
If every person behaves in own best interest *(renegades?),*
the result can be a decrease in quality for overall community.
Why is this a tragedy? two virtues: freedom + common good

- If you teach at Christian school and want to live dangerously,
from each according to abilities, **to each** according to needs.
(in principle ≠ in reality, rule-makers know [Rawls], motivation)

American Christianity: What is American, what is Christian?
Acts 2 & 4 socialism? voluntary private ≠ government forced

a reality-based effective practical solution must take into account:
practical **psychology** (at level of individuals)
practical **sociology** (at level of groups)
practical **economics** (an important factor)
explore the +s and –s of various options (Monday vs Tuesday)

Christian Stewardship as a Whole-Life Worldview

[google: christian stewardship worldview]

(links-homepage, Keith Miller who was source of my idea)

[www.asa3.org/ASA/education/views/stewardship.htm]

WORLDVIEW: A view of the world, used for living in the world.

Bible-based principles that include

loving your neighbor as [much as] you love yourself

(in the same way, with same motivation and reasons)

(circles of decreased caring: self, family, friends, city, nation,…)

love God with whole heart, mind, soul, strength

as foundation and power source (John 15) for loving neighbors,

for always living by faith in obedience to God's commandments.