TRANSPORT ← HOW DO MATERIALS MOVE FROM ONE PLACE TO ANOTHER?

and

FATE ← WHERE DO THEY END U AND IN WHAT FORM?

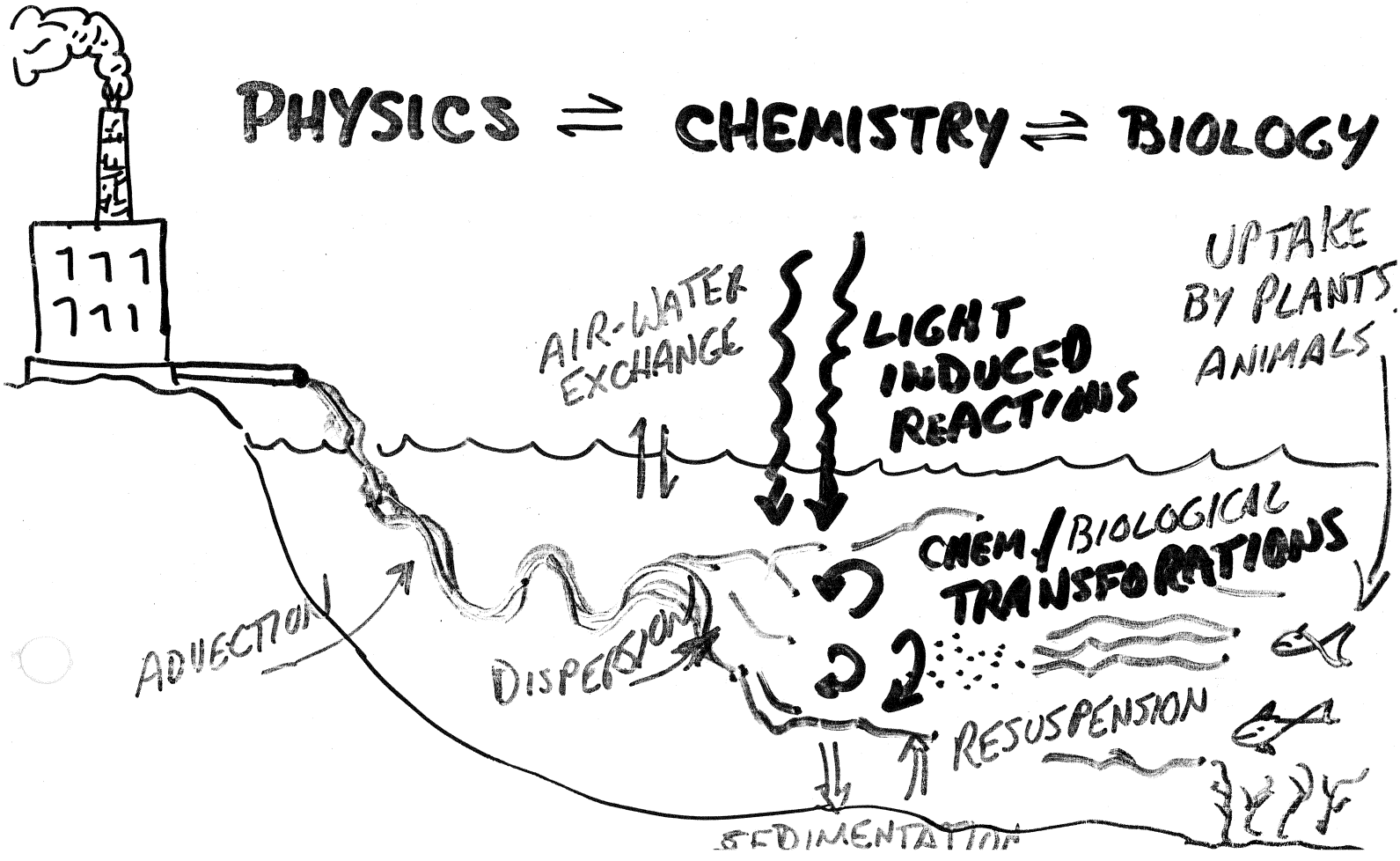
of

TOXICS ← MATERIALS HARMFUL TO HUMANS, ANIMALS, PLANTS

in the

ENVIRONMENT ← WE'LL FOCUS ON WATER AND ASSOCIATED SOILS AND SEDIMENTS

PHYSICS ⇌ CHEMISTRY ⇌ BIOLOGY



COURSE SCOPE AND GOALS

- Gain a better understanding of transport & fate of chemicals.

  QUANTIFY:
  - MOVEMENT
  - REACTIONS
  - SPECIATION

- Determine the exposure of aquatic organisms or humans to chemicals:
  - HOW MUCH?
  - WHAT FORM?
  - HOW LONG?

- Predict future conditions for various loading scenarios of management action alternatives

WHY DO WE NEED TO KNOW ALL THIS?

ENV. SAFETY

What makes an acceptable environment for organisms/humans

REGULATIONS

Laws that specify conditions that create/preserve that safe environment.

WATER QUALITY CRITERIA

Chemical and physical conditions that correspond to specific states for organisms

EXPOSURE AND EFFECTS

(What happens when an organism is exposed to a certain form, concentration for a certain ti

TRANSPORT, TRANSFORMATIONS, SPECIATION

What processes move, mix, dilute, modify, (reactions, etc), transform a chemical