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Piaget Stages with Math and Science Concepts

Sensorimotor Stage (0-2y)

- Observing
  - In this age, the child uses his five senses to absorb everything around him and that how his learning journey begins.
- One to One Coresspondence
  - Its one of the first things a child learns which is to relate one object to another, it helps the child to understand the world around him better.

Preoperational Stage (2-7y)

- Ordering & Patterning
  - Ordering and Pattern is a common mathematical method that teaches students conservation, repetition, and sequencing.
- Shapes
  - The Importance of Learning Shapes in Preschool. From an early age, kids notice different shapes even if they don't yet know that the shapes have names. It takes longer for young children to learn the specific properties of each shape, such as the number of sides or how the shape looks.
- Comparing
  - Understanding the difference and the similarities will help the student in future with other related concepts
- Counting
  - In this age children need to learn the the first or the basics of math concepts to help them learn more advanced mathematical concepts.
- Parts & Wholes
  - Children need to understand that for example an apple cut from the middle does not mean we have two Big size Apples its the same apple separated, simple things like that is used in mathematical equations a lot, so to learn the idea of parts and wholes is very important for future mathematical studies, sometimes children learn the idea of parts and wholes simply by Observing.

Concrete Operational Stage (7-11y)

- Predicting
  - Before conducting any experiment, the teacher asks the students to predict what will happen and that helps in exciting the students, relate it to the real world, think in an advanced way.
- Classifying
  - Classifying shows if a student understand the Idea and if he can find related things.
- Communicating
  - By Communicating the student will benefit from others ideas and experiences.

Formal Operational Stage (12y & +above)

- Hypothesize
  - Students start to learn more complex Science Methods, and that's how Hypothesizing comes students begin to make educated Guess to reach to the right or the wanted result.
- Measuring
  - Measuring teaches students to relate the measurement of a certain object to a certain number. and in this age the student needs to learn exact numbers of measuring
- Inferring
  - By Watching or hearing and even smelling People Infer whats gonna happen next and that is used in science a lot especially in experiments, it's usually Used with Older students because it is a little complex for the younger once.

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