



## Observations

The Puzzle School philosophy is based on a few core observations:

- In order to do your best work you need to be in an environment where you feel trusted and respected. Maybe more importantly, though, you need to care about the work. It can't be coerced. Your best work can only come if you legitimately care about it.
- The most effective learning tends to come when information is presented in different formats, at a pace that can be controlled by the learner, and in a manner that allows for non-judgmental "failure." Testing your understanding, receiving feedback, and developing a better understanding based on that feedback is a crucial part of the learning process.
- The range of skills and knowledge used by adults is extremely diverse and not limited to the subjects taught in school. Too often, though, the only time students have to explore the diverse options that exist in the real world and cultivate their own personal interests and talents is outside of school hours.
- The relationships formed through school are often as important or more important than what is learned. Students consistently benefit from healthy relationships with adults who understand who they are, what challenges they face, and what their goals are, especially if the adults act as advocates for the student.

*"If you want to build a ship, don't drum up people to collect wood and don't assign them tasks and work, but rather teach them to long for the endless immensity of the sea."*

– Antoine de Saint-Exupery

## The Puzzle Metaphor

The name, The Puzzle School, is a fundamental part of the vision. The name will encourage students attending The Puzzle School to associate their educational experience with the process of solving a puzzle, a creative process that is highly iterative.

The metaphor derives from creative work. Everything from painting to politics to software engineering to writing to cooking to management can feel like solving a puzzle if the creative challenge is appropriately difficult for the individual. Under those circumstances creative work becomes an iterative process where you are trying to fit together the pieces. If something doesn't fit quite right then you try something else until you've formed a cohesive whole. The "whole" may be a painting, a novel, a tech startup, or a political campaign. Regardless it is a creative process that is highly iterative. This process is also reflected in the Scientific Method and Design Thinking.

The puzzle metaphor derives from this observation and, as such, has two core components:

## Interesting Challenge

The value of a puzzle does not lie in the solution. With the most classic puzzle, the jigsaw puzzle, you can see the solution right in front of you. Rather, puzzles are about the creative process of solving an interesting and challenging problem. We engage with them because we want to challenge ourselves, because we enjoy being challenged.

## The Scientific Method / Design Thinking

Puzzles embody the scientific method and design thinking, requiring you to:

- Observe deeply
- Ideate strategies and hypotheses
- Find ways to test those strategies
- Look for feedback
- Iterate using the feedback
- Expect setbacks and nonlinear progress

Puzzles offer a scaffolded approach to learning this process, starting with highly structured puzzles such as jigsaw puzzles or the puzzles in a Montessori classroom, building toward open-ended creative work.

These two ideas will permeate The Puzzle School. Students will encounter and create inspiring and challenging experiences and will be trained to leverage design thinking and the scientific method to approach challenges and goals in a creative and iterative fashion. This will produce graduates who see the world as an interesting and fascinating place, full of potential for them to make a unique contribution, and empowered to take on the challenge.

## Practical Examples

The Puzzle School is still in an exploratory design phase and will continue to evolve, but the following ideas are likely to be used. They demonstrate how the puzzle metaphor can be used to reflect the core observations that inspired The Puzzle School.

### Advisors

Each student will be assigned to an advisor. This advisor will be dedicated to understanding each student at a personal level that goes beyond just academics. They'll understand each student's goals, the challenges they face inside and outside of school, and the opportunities that are open to them, helping them navigate everything and get the most out of their experience at The Puzzle School.

### Co-Designed Curriculum

At the beginning of each semester each student will work with their advisors and parents to co-design a curriculum that best reflects the student's needs and interests. This will both empower students, giving them greater ownership over their educational experience, while also providing opportunities for conversations between the student, parents, and advisors about the challenges students will face in college and the real world for which they need to prepare.

*"The minute I dropped out I could stop taking the required classes that didn't interest me, and begin dropping in on the ones that looked interesting."*

– Steve Jobs

## **Retrospectives**

On a bi-weekly basis groups will gather to give feedback on their experiences during those two weeks. These experience reports will empower students to make a difference in their school, help students develop observational and communication skills, and improve the school based on first-hand feedback.

*“As soon as children find something that interests them they lose their instability and learn to concentrate.”*

*– Dr. Maria Montessori*

## **Competency-Based Programs**

The Puzzle School will seek to create competency-based programs when possible, allowing students to prove their competency in a given subject at any point. This provides students with the opportunity to explore material in a manner and a pace that they choose, allowing them to accelerate their learning. Students will be able to explore strategies for learning that will aid them in college and the real world.

## **Design Sessions**

Design thinking can be used to evaluate and iterate on the school environment, programs, the local community, etc. The Puzzle School will often engage students in design sessions to help improve how the school looks, how the school runs, how specific programs are developed, how students interact with the local community, etc.

These are just a few examples of techniques The Puzzle School will leverage to help empower students, give them greater ownership of their environment and their learning, and, in doing so, prepare them to take ownership of their own lives as adults.

## **The Logistics**

The puzzle metaphor provides a framework that is applicable to both younger and older students, but, depending on the needs of the local district, The Puzzle School, may start out serving a specific age group. At this time the most likely starting point is high school. The eventual goal, though, would be to serve kindergarten through high school students over time and as permitted by the district.

A great deal of attention will be paid to the physical space itself. Every attempt will be made to create an environment that is open, inspirational, connected with the local community, and engaging. The space will be filled with thought-provoking murals, interactive challenges such as you might find at a science museum, and accessible areas filled with books, art supplies, maker materials, etc.

The Puzzle School will be open 8am - 6pm, year round to meet the holistic needs of parents and students, but will be flexible so that families can spend time with each other on convenient schedules. Students will be able to work more independently, taking breaks and vacations when desired without having to worry about missing fundamental lessons and falling behind.

## **Programming**

The goal of The Puzzle School is to serve the needs and the goals of

each individual student effectively.

In order to accomplish this The Puzzle School will focus most of it's efforts on creating the most interesting and engaging programs both to help students with fundamental skills such as reading and writing as well as to involve students in complex, multidisciplinary activities that allow students to see the interconnected nature of their learning.

At the same time The Puzzle School will seek to leverage external resources including community programs, local college courses, online resources, internships, and tutoring/mentoring from volunteers.

A few examples of possible multidisciplinary programs might include:

**Plays from Scratch:** A group collaboration to write a play and either act it out or animate it through Scratch (a software engineering tool), recording each character's voice to bring it to life.

**Structural Strength:** Can you build a wall to stop a flood? Can you build a container that can protect an egg from a fall? How do structures in the real world incorporate different structural techniques while maintaining a high quality aesthetic as well?

**Elder Advice:** Video record interviews of parents and grandparents asking them about the most important lessons they've learned in their lives. Compare the advice from your family with other families and advice found in other sources such as commencement speeches and reflect on how those lessons apply to your own life.

**Signs of Life:** What does it mean to be alive? Take nature hikes and study different biological environments, read philosophical texts on what it means to be alive, and program robots with basic artificial intelligence that are responsive to feedback.

**Physical Music:** Explore diverse music styles from around the world and how they are created. Perform with musical instruments you've created from recycled materials while learning about the physics of how each instrument works.

In addition to developing interesting programs The Puzzle School will strive to create an interesting environment as well, allowing students to engage in interesting open-ended activities when not involved in a specific program. The school will be filled with student work to celebrate and inspire other students. Books will adorn the walls and will be available to borrow. Arts and crafts areas and makerspaces will be designated and open to students. Debate clubs and other student organized activities will be integrated into the school day.

In general the school day will be structured but flexible. Programs will be offered at specific times, but every attempt will be made to accommodate students who have conflicts. Additionally students will be encouraged to engage in independent projects and look outside of the school walls to find classes online and in the local community and potential internships that reflect their personal interests.

*"Do not train a child to learn by force or harshness; but direct them to it by what amuses their minds, so that you may be better able to discover with accuracy the peculiar bent of the genius of each."*

– Plato