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**Innovation statrs with action!**

**STEAM Lesson Plan**

This is an example lesson plan

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| **School & Country** | Mersin Bilim ve Sanat Merkezi |
| **Teacher** | Yıldız Kanlıöz –Primary school teacher |
| **Class age of students** | 10-12 |
| **Lessons** | Mathematic – Art- Robotic-History-Nature science- Dijital Story telling |
| **Themes** | Geometry around us |
| **Time duration** | 2 month (November-December) |
| **What will be learn? Which methodology are used for these activities?** | Students will be learn geometry in their real life.  Learning by doing  Exploring  Disscusion  Demonstration |
| 1. **Materials** | Geometrical shapes, leaves, phones or tablets, computers,  Lego EV3 Robot set, patatoes, colours, |
| 1. **Art** | Working with Potato printing or/ and leaf printing about the theme geometry.  geometrical shape printing with potatoes ile ilgili görsel sonucu |
| 1. **Science** | Exploring for geometry in the nature and real life. Students explore in groups the natüre and find the geometry in the natüre. They take photos and create a poster or presentation about it. |
| 1. **Technology** | Use paint program or 3D programs for creating geometric designs.  Let the student make a digital story or a documentary movie /or a thriller movie about the geometry in the buildings / in the nature around them. |
| 1. **Engineering** | Use wood or woste materials to create a castle or an other builduing with geometrical objects. |
| 1. **Robotics** | Students will be program their robots so that the added pencil draw a geometrical shape. For example draw a square or triangle with the robot.  <https://plus.google.com/+DamienKee/posts/ZrsNx3RjZpP> |
| 1. **Coding and programming** | Students explains their coding and programming of their robots. |
| 1. **ICT and Web 2.0** | Tinkercad, scetchUp, <http://www.sweethome3d.com/>  Coding shapes with the <https://www.khanacademy.org/> free lessons.  Agumented realty apps for example quiver apps and platonic shapes  <http://www.quivervision.com/education-coloring-packs/#quivervision-platonic-solids> |
| 1. **Museum Activity** | Find the geometrical shapes in the historical objects, how is the geometry used in the history? |
| 1. **Nature Activity** | Look around and find the leaves and flowers symmetry and geometry in the nature |
| 1. **School Activity** | Students groups make a presentation about their Works and give feedback to the other groups.  They explain the desing about the circle, sqaure or triangle to their classmates. |
| 1. **How to measure these activities?** | Surveys before and after the activities will be made to the students. |
| 1. **How Innovative is it?** | It will be innovative if the students can be take part and get their mind and creativity free. |
| 1. **Creativity** | Students explains their ideas in a creative way to us. |
| 1. **Interdisiplinary** | Geometry is integrated in different subjects cirriculum and in real life. |
| 1. **Measurable** | It is measurable because students fill the surveys they get different view of the theme and they use technology. So we can give points for their work and outcomes. |
| 1. **Sustainability** | Every school can make these activities in their school and in real life. |
| 1. **Applicability** | This theme is applicable with different subjects and is important for design and art.  So that can be integrate into robot programming too. |
| 1. **Collobrative** | It is collobrative, because the students are working in groups. |
| 1. **Economic in save of time and money** | All the activities can be integrated in real life and the materials are very cheep. |