Lesson 2: Introduction to Tinkercad + First Project

3D Printing Center - Village School

v1
2025

Welcome Back!

Quick Review + Today's Mission

What did we learn about 3D printing?

- Builds layer by layer, starts with computer designs
- Uses heated plastic, helps people in many ways

Today we will:

- **Login** to Tinkercad and learn navigation
- **Design** your first keychain
- **Save** and share your creation

Meet Tinkercad

Your 3D Design Tool + Getting Started

- **Free** online tool, **easy** to learn, used by **millions** of students

Login Steps:

1. Open browser to **tinkercad.com**
2. Click **Log In**
3. Click **Students with Class Code**
4. Enter **Class Code** from slip
5. Enter your **Login Code**
6. Wait for everyone before moving on

Basic Navigation (10 minutes)

The Big Three:

- **Rotate** - spin around your design
- **Zoom** - get closer or farther
- **Pan** - move left, right, up, down

Follow along with the built-in tutorial

Your Keychain Project

Step-by-Step Building

1. **Start** with a basic shape (cube, cylinder, etc.)
2. **Add text** with your name or initials
3. **Create a hole** for the keyring
4. **Combine** shapes together

Take your time - we have 25 minutes! Raise your hand for help.

Next slides are your reference guide - keep them handy!

KEYCHAIN PROJECT REQUIREMENTS

Must Have:

- **Hole for keyring** (at least 5mm wide)
- **No bigger than 50mm** in any direction
- **At least 3mm thick** walls
- **Use at least 2 shapes**

BUILDING STEPS

Step-by-Step:

1. **Start** with a basic shape (cube, cylinder, etc.)
2. **Add text** with your name or initials
3. **Create a hole** for the keyring
4. **Combine** shapes together (select all → group)

Design Tips:

- **Keep it simple** for your first try
- **Make walls thick** enough (3mm minimum)
- **Be creative** with shapes and text

TROUBLESHOOTING

Common Issues & Solutions:

- **Can't see design?** Try zooming out
- **Shapes won't combine?** Select all, then group
- **Text looks weird?** Check the height setting
- **Hole too small?** Make it at least 5mm wide

Need Help?

- **Raise your hand** for teacher help
- **Ask a neighbor** if they figured something out
- **Try different things** - you can always undo!

INSPIRATION IDEAS

Keychain Examples:

- Simple name tags
- Sports themes (ball, basketball, football)
- Animal shapes (cat, dog, butterfly)
- Hobby interests (games, books, art)
- School pride (books, pencils)

Don't Forget to SAVE!

Design menu → Save → Give it a good name

TIME MANAGEMENT

You Have 25 Minutes:

- **5 min:** Get familiar with tools
- **15 min:** Build your keychain
- **5 min:** Final touches & save

Remember: Have fun and be proud of your work!

Save Your Work!

Don't Lose It!

1. Click **"Design"** menu
2. Choose **"Save"**
3. Give your design a good name
4. Make sure it's saved to your account

Gallery Walk

Show and Tell Time!

- **Walk around** and see everyone's designs
- **Give compliments** to your classmates
- **Ask questions** about cool features
- **Be proud** of your work!

What's Next?

Printing + Preview

Your designs will be printed between lessons!

Next Lesson: "How Printing Works + Design a Container"

- See your keychains printed!
- Learn more about the printing process

Cleanup + Reflection

5 Minutes to Pack Up

- **Save** your work one more time
- **Close** your browser tabs
- **Clean up** your workspace

Quick share: What was easy/challenging about Tinkercad today?

Excellent work designing today!