

REVIEW LESSON

MTA Course: 10754 Microsoft .NET Fundamentals

Lesson name: Microsoft .NET Fundamentals 2.1

Topic: Understanding .NET class hierarchies (One 50-minute class period)

File name: 10754_Msft.NET_RL_2.1

Lesson Objective

2.1: Understand .NET class hierarchies. *This objective may include but is not limited to:* understanding system classes, classifications of classes, and logical organization of classes

Preparation Details

Prerequisite student experiences and knowledge:

This MTA Certification Exam Review lesson is written for students who have learned about application programming with the Microsoft® .NET Framework. Students who do not have the prerequisite knowledge and experiences cited in the objective will find additional learning opportunities using resources such as those listed in the “Resources” section at the end of this review lesson.

Instructor preparation activities:

- Make copies of the Student Activity available if needed. (See the “Additional teacher notes” section at the end of this document.)

Resources, software, and additional files needed for this lesson:

- 10754_Msft.NET_PPT_2.1
- Microsoft Visual Studio® 2010; students may also use Microsoft Visual C#® 2010 Express or Microsoft Visual Basic® 2010 Express, available free at <http://www.microsoft.com/express/Windows/>.
- Students will need access to the following page on MSDN®: <http://msdn.microsoft.com/en-us/library/ms973231.aspx> (or provide copies of the Student Activity document, 10754_Msft.NET_SA_1.2).

Teaching Guide

Essential Vocabulary

assembly—a collection of types and resources that are built to work together and form a logical unit of functionality within a program.

namespace—an organizational unit for categorizing classes and for preventing name collisions.

Objectclass—the ultimate base class for all classes in the .NET Framework.

Systemnamespace—a collection of classes and types that provide the foundation for creating .NET applications.

Lesson Sequence

Activating prior knowledge/lesson staging (10 minutes):

1. As indicated in the Microsoft PowerPoint[®] presentation, direct students to discuss with a partner any projects in which they added using or Imports statements to their programs.
2. Ask for a few examples to share with the class.
3. Ask students to talk about why they had to add these statements, or how they knew they needed to add the statements.
 - Responses will vary, but students might say, “The compiler didn’t know the class I tried to use,” or “The using statement told Visual Studio where to find the class I wanted to use.”

Lesson activity (20 minutes):

1. Use the presentation to review the hierarchical organization of classes within the .NET Framework.

Assessment/lesson reflection (20 minutes):

1. As indicated on the “Assignment” slide in the presentation, direct students to complete the activities found at <http://msdn.microsoft.com/en-us/library/ms973231.aspx> or on the Student Activity document.

Resources:

- **MSDN: Object Class**
<http://msdn.microsoft.com/en-us/library/system.object.aspx>
- **MSDN: Understanding and Using Assemblies and Namespaces in .NET**
<http://msdn.microsoft.com/en-us/library/ms973231.aspx>
- **System Namespace**
<http://msdn.microsoft.com/en-us/library/system.aspx>

Additional teacher notes:

- The activity found at *<http://msdn.microsoft.com/en-us/library/ms973231.aspx>* is reproduced in the Student Activity document, 10754_Msft.NET_SA_2.1, if students do not have access to the site.